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AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

MAY 1, 1946



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AMERICAN NURSERYMAN

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The Nurseryman's Forte: To Make America More Beautiful and Fruitful

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CLOSING DATE—Present printing conditions require that more time be given for putting current issues of the American Nurseryman through the press. So if you send material for either the advertising or the news columns of the **May 15** issue, please mail in time to reach this office by **May 7**.

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AMERICAN NURSERYMAN

F. R. KILNER, Editor

Editorial

RAISING OUR SIGHTS.

Sample polls are of doubtful value in predicting a close political race, but as an indication of a trend they are usually worth attention. A recent survey of the public's gardening intentions made by the federal bureau of agricultural economics is of special interest because, while it revealed a drop of three per cent in the number of gardens in 1945 from the year 1944, it indicated that more persons expected to garden in 1946 than in 1945.

In the survey 3,000 samples were taken from seven metropolitan areas and forty-seven counties — areas which experience had shown were a representative cross section of the United States.

The predicted increase in gardening this year over 1945 was contrary to expectations; a drop in the size and number of gardens seemed probable because of the end of the war and rationing. The figures actually indicated that forty-three per cent of the nonfarm families interviewed planned to garden in 1946, compared to forty-one per cent last year, and that ninety-one per cent of the farm families planned gardens this season, compared to eighty-three per cent in 1945.

Last year, by the survey, 18,400,000 gardens were reported. With the indicated increase and with the likely addition of gardens cultivated by at least a million returned married servicemen, prediction of 19,500,000 or 20,000,000 gardens in 1946 seems reasonable, according to the Department of Agriculture figures.

That prediction seems the more reasonable inasmuch as the survey was made before the current proclamations on food production and restricted consumption in this country because of the famine conditions in Europe. The survey was made, also, before the national garden conference at Washington, D. C., which may be expected to stimulate garden activities throughout the country.

In short, the end of the war brings, not a shrinkage in gardening interest on the part of the public, but evidence of certain continuation and probable increase.

As agricultural conditions improve the world over, emphasis will shift from food production to home im-

provement, from vegetable plots to ornamental gardens.

In the face of this enlargement of public attention to plants, is it not time for the individual nurseryman, as well as for the industry as a whole, to disregard sales volume and production figures of prewar years in setting his sights for the seasons ahead? If our output and our distributive organization are set only for the last normal year—whenever that was—we are likely to lag behind the prospective market.

Some nursery firms are, indeed, looking ahead with a view to expanding their facilities to serve a larger gardening public and to serve it better. Outsiders are being attracted to this field by its rosy market prospects. Yet these will care for only part of the thousands of communities that will demand more in the way of plants than ever before. Each individual nurseryman would do well to survey his territory and note the change in his market prospects since the day when he last engaged in active selling, instead of dodging customers. Then he will, in most cases, be impelled to raise his sights in shooting for sales volume records in the seasons to come.

We can develop the market set before us by 20,000,000 gardeners, so as to add shade trees, shrubs, hedges and perennial borders to their home grounds. But if we are not ready, the present vegetable gardeners may feel the necessity of filling their needs with flower seed packets later; seedling trees will be planted where specimens should be, and trifling shrubs will fill spots others deserve. We may not only miss making sales; we may miss the opportunity of expanding our market when it is before us.

QUARANTINE PROBLEMS.

The revision of the plant quarantine law of 1912 and quarantine 37 proposed by the American Association of Nurserymen and endorsed at several meetings of the trade in recent months is likely to arouse no more than passing interest on the part of the average reader. That such revision is of importance is indicated by the text of the resolution passed at the meeting of the National Plant Board, reported in the April 1 issue of this magazine.

Few of us recognize how modern transportation has affected international relations and shortened dis-

tances across continents. The marvels of transportation wrought during the war will be translated into commerce, with an effect that not many yet realize.

How this will affect those concerned with plant crops in this country is set forth with unusual clarity in the address, published in this issue, presented by the president of the Central Plant Board at its recent meeting. The magnitude of the problems which may be raised by the expansion of our foreign commerce in the years immediately ahead is brought home to us. The importance of the subject, not just to state regulatory officials, but to nurserymen and gardeners, professional and amateur, throughout the country warrants careful reading of Dr. Drake's address, with some thought as to the action that may be needed to meet the problem.

PLAN TOWN MEMORIAL.

All the nurserymen of the town of Abington, Mass., recently voted to cooperate in a joint building of the memorial plan at the high school and Legion property. Donald D. Wyman, of the Bay State Nurseries, was chosen chairman of the committee, with other members including Sterling Myrick, of the Littlefield-Wyman Nursery; Louis A. Reardon, of Arch street; Charles F. Hohman, of Washington street, and Harold Stevenson, of the Bay State Nurseries. Later the joint plan was presented to the town board of trustees for approval. It is hoped to have the project, the first living memorial to be constructed in the state, done in late spring.

U.S.D.A. APPROVES USE OF DDT INSECTICIDES.

Use of certain types of DDT insecticides as a means of treating potting soil in nursery plots to meet certification requirements of the Japanese beetle quarantine regulations has been approved by Dr. P. N. Anand, chief of the bureau of entomology and plant quarantine of the United States Department of Agriculture.

Nurserymen and greenhouse operators within the Japanese beetle regulated area who are interested in the new method of treatment may obtain detailed information from the bureau's field headquarters at 503 Main street, East Orange, N. J., or from their local Japanese beetle inspector.

The Mirror of the Trade

Announce Regional Prize Competition for Designs of Small Home Grounds

The announcement in this issue of a prize contest for designs of small home grounds carries more than the offer of awards for meritorious planting plans. From it may come a better type of planting on the grounds of the hundreds of thousands of modest homes that are to be built in the next few years. With the cooperation of the National Landscape Nurserymen's Association, the American Nurseryman sponsors this contest, the rules of which appear on the following two pages, in the expectation of affording nurserymen of the country—and through them the present and prospective owners of small homes throughout the country—timely and valuable planting suggestions through the publication of the prize-winning designs and any others that may be meritorious.

The demand for small homes has led to many efforts to formulate practical architectural plans in the modern style. Builders' organizations and lumber companies have already provided dealers and contractors with architectural plans for small homes of various modern types. Among newspapers, the Chicago Tribune recently completed a prize contest for such architectural designs, which brought forth a considerable number of original and practical plans. Such efforts as these will make available to builders of small homes excellent architectural plans at small cost and will enhance the character of the dwellings to be erected.

Similarly the builders of small homes might be given assistance in the planting of the grounds, with several results—better plantings, more attractive communities and larger sale of nursery stock.

Planting designs for these small homes of modern types are not now available. Stock plans that appeared in books on landscape design and planting—most of which are now out of print, anyway—were not suitable for the current style of small home architecture, usually of low spreading type. Besides being unavailable, most of them are out of date.

In recent years, moreover, more practical types of landscape designs for small homes have developed from the experience of landscape and nursery firms, upon whom has fallen most of the work of preparing plans—when they were prepared—for the

grounds of dwellings of modest size. This contest will be of special interest to the designers in the employ of such firms. At the same time participation in the contest is expected from practicing landscape architects and any other designers—it is open to all.

To encourage the widest participation, the contest has been reduced to as simple terms as possible. On the following two pages appear the floor plans and elevations of four types of houses—modern, ranch, Cape Cod and colonial. These plans appear in the scale of one-sixteenth inch to the foot. Designs are to be submitted in that scale, in India ink, on opaque white paper, each plan complete on a sheet 13½x20 inches. Thus the floor plan and elevation of a given house will be transferred to the sheet in the same dimensions as printed here, and the planting design is to be sketched in. The rules of the contest should be read carefully in this connection. The list of plants and the planting key are to be lettered on the same sheet, in sufficient size to be readable when the 13½x20-inch sheet is reduced to one-quarter that size (one-half reduction each way) for publication.

Since different plants will be used in different parts of the country, five climatic zones, shown on the map on the next page, form the basis of dividing the contest into five regions. Each of the four problems is to be dealt with for each region, and a prize of \$50 will be awarded for the best solution of each of the four problems in each of the five regions. Thus, there will be twenty prizes in all.

In addition, any designs besides the

prize-winners which are considered worthy of publication will gain an honorary award of \$25.

Judges will be announced in these pages later. They will be members of the National Landscape Nurserymen's Association. A committee of judges will be named in each region and will select the four prize-winning plans in that region and make recommendations for honorary awards.

The four prize-winning awards from each of the five regions will later be judged by a general committee, which will select from them one to receive the sweepstakes prize of \$200.

While no entry fee is required, those who wish to enter the contest should send their names as early as possible to the contest adviser, Harold E. Hunziker, Box 313, Niles, Mich. Then information on questions raised by any contestant can be sent to all persons entering the contest.

One person can submit entries for one or more, or all four, problems in a region. He may, if he wishes, submit entries with planting plans for more than one region, but each must be complete in itself. In other words, completed sketch must be submitted with individual planting plan.

Completed designs should be mailed by midnight September 5, 1946. Judging will be completed as soon as possible thereafter, and awards will be published in the American Nurseryman.

For details of the contest, read carefully the rules published on the following two pages.

Out of the contest should come a great variety of ideas, for the better planting of the vast number of small homes that will be erected in the next few years. The rules of the contest have been prepared with a view to reproduction of at least the prize-winning designs, not alone in this magazine, but probably in such form as to widen their application and influence.

Hence the individual who enters a design in this contest is not shooting alone at the \$50 offered as regional prizes and the \$200 offered as a sweepstakes prize, but also for recognition and a share in promoting better planting about the new small homes of the postwar era.

Details of
Competition
for Designs of
Small Home Grounds
on Following
Two Pages.

COMPETITION FOR THE DESIGN OF SMALL HOME GROUNDS

SPONSORED BY

National Landscape Nurserymen's Association
and the
American Nurseryman.

PREAMBLE.

In recent years there has been a lack of published works of landscape designers. Even those published books of past years are rapidly going out of print. It is desirable that the thoughts of contemporary landscape designers be recorded and the subject of the landscape treatment of small properties be brought up to date. To get this modern interpretation of what the landscaping around the homes to be built in the next few years should be like, we are offering this competition to bring forth the efforts of the landscape designers of the country.

It is our hope that the designs submitted for the consideration of the judges will be many and varied, so that the publication of the results of this competition will make a worthy contribution in the outdoor planning of the small homes of the nation.

COMPETITION OPEN TO ALL!

The competition is open to anyone, except the adviser and the persons selected to act as the jury in each region. More than one design for the same problem may be entered. Two or more persons may collaborate in submission of a design.

There is no entry fee involved. However, those entering the competition should send their names to Harold E. Hunziker, Secretary, National Landscape Nurserymen's Association, P. O. Box 313, Niles, Mich., so that they may receive any further announcement regarding the contest should it be necessary.

THE PROBLEMS.

The committee has selected four reasonably typical home types: as the house designs to be used in the competition. One represents a small colonial home, one a small Cape Cod home, another a ranch house, and the fourth a modern home.

In order that all sections of the country may be included in this competition, five regions have been set up as shown on the map below.



For each problem in each region is offered a prize of \$50.00.

20 PRIZES OF \$50.00 EACH

In addition a Grand Prize of \$200.00 will be given for the best all-around design, selected from the first-prize designs, for each problem from all the five regions.

Any contestant whose plan is published, but has not received a contest award, will receive an honorary award of \$25.00.

It is to be assumed that homes and grounds are for the average young to middle-aged American family, in an average suburban residential community. Each family has no preconceived notion of what their home grounds should be, but they do desire up-to-date and attractive surroundings, making the best possible use of the limited areas around their homes.

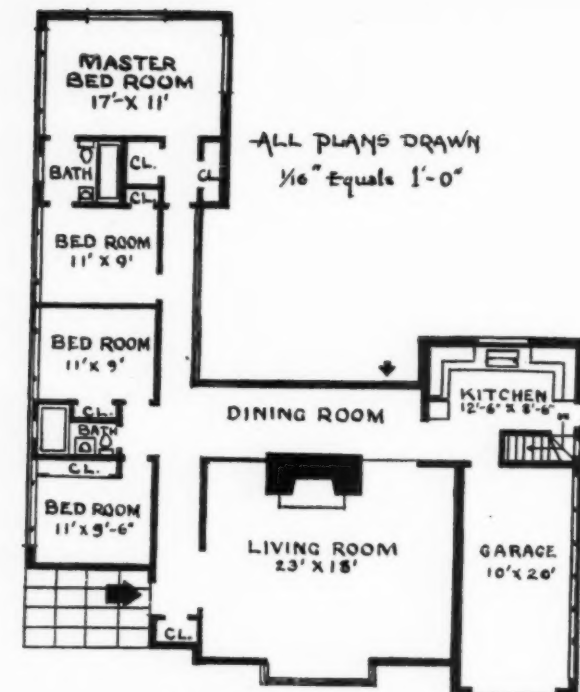
The following are the general requirements for each type home:

Cape Cod Style: To be located on a fairly level lot 50 x 150 feet; house to be placed no nearer than 30 feet from the street or nearer than 5 feet to side lot lines. An alley runs behind this lot; so access to garage can be had from the alley. The only special requirement is for a small salad garden and an area for the sand box for their 2-year-old baby.

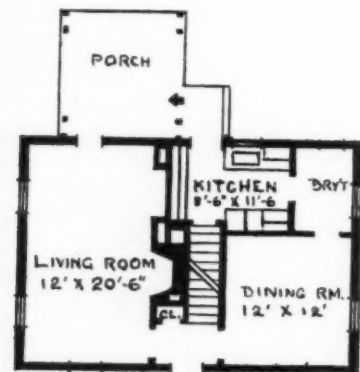
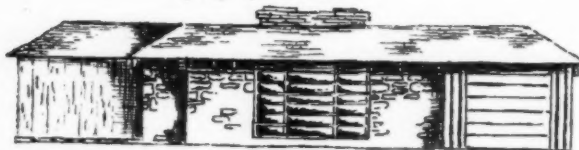
Modern Style: To be located on a flat lot 75x150 feet, the house to be placed no nearer than 20 feet from the street or nearer than 10 feet to side lot lines. The drive is to come from the front to the garage attached to the house. This family has one daughter, 15 years old, and is desirous of having an area for lawn games such as badminton, croquet, shuffle board, etc. They expect to make use of the outdoor space as part of their living area. The interior and exterior areas should be as a complete unit. If possible the owners would like a few fruit plants, as well as vegetable garden not to exceed 600 square feet.

Colonial Style: To be located on a lot that is gently rolling in front and reasonably level to the back lot line. The lot is 50x150 feet; the house to be placed no nearer than 30 feet from the street

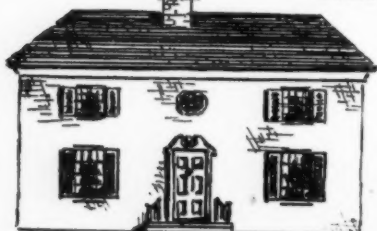
ALL PLANS DRAWN
1/16" Equals 1'-0"



RANCH STYLE



COLONIAL



\$1,200.00 IN PRIZES

COMPETITION CLOSSES SEPTEMBER 1, 1946

20 PRIZES OFFERED IN FIVE REGIONS -
PLUS EXTRA GRAND PRIZE OF \$200.00

or nearer than 5 feet to side lot lines. The single-car detached garage can be located as desired by the designer, with access from the front. These home grounds are for a middle-aged couple who take special pride in their surroundings. Their grown children have moved from the home, but make frequent visits. A vegetable garden, which could later be used as a flower garden, is desired.

Ranch style: To be located in a valley-like lot, gently rolling, 100x200 feet; the house to be placed no nearer than 35 feet from the street or 10 feet from side lines. This family has two growing boys, ages 10 and 13. They have moved out to the edge of town where more space would be available. Certain areas of the grounds should be usable for the boys and their friends. Provisions for a few pets might be provided on the grounds. Though the area is quite large, the family intends to maintain the grounds themselves. A few fruit trees and 1,000 feet, or less, for a vegetable and small fruit garden should be provided.

General: On all these arrangements the designer will have an opportunity to orient the house on the lot. However, the directions the designer assumes are to be clearly shown on each plan.

Each plan can show a 5-foot sidewalk parallel with the front lot line and a parkway 12 feet wide parallel with the sidewalk.

The planting keys to accompany the plans must be suited to the region selected as the location for the home grounds for each plan. The region selected must be shown on each drawing.

The all-over costs of the landscape layouts must be in keeping with the houses shown. The maintenance costs (or efforts of the family) must be considered, as well as the initial outlay for landscaping program.

Special attention should be given the design for the so-called foundation plantings.

CONSIDERATIONS OF THE JURY OF AWARD.

The designs will be judged on:

- (1) The general appropriateness, practicability and attractiveness of the home grounds.
- (2) The regional suitability of the plant material selected. This will take into account the ultimate size of the plant material and the suitability of the plants selected as to color, texture, fragrance, etc.
- (3) Originality in the solution of the problems.
- (4) Consideration for the effort needed in the upkeep of the property, as well as the initial outlay.

Emphasis will be placed on the solutions of the problems and not composition or technique of the drawings.

DRAWINGS REQUIRED.

The competitor is requested to prepare for each design a planting plan, drawn to scale; one-sixteenth inch equals one foot (the accompanying floor plans and elevations of homes are in this scale). On the same paper he is to show his suggestion of the front "foundation planting" on the elevation shown for each style home. A hand-lettered planting key must accompany each plan on the same piece of paper. Both the botanical and usual common name should be used. The first number is to indicate the type of plant, the second number the amount of plant material needed (thus 1-3 means "1" indicates *Kolkwitzia amabilis*, beauty bush, and "3" means three shrubs are needed for the space. Lettering should be large enough to be legible when reproduced at one-quarter size.

All required drawings for each design shall compose a single sheet of opaque white drawing paper; the drawings to be contained in a space exactly 13 1/4 x 20 inches. The sheet is to be read with its long dimensions vertical. The drawings are to be in opaque black ink (no diluted ink, color or wash).

The composition of the planting plan, the elevation and the planting key on the drawing should be as orderly as possible. The drawings need no title, but should indicate the region selected for the home grounds and the directions assumed (facing north, etc.).

ANONYMITY: Drawings shall contain no identifying marks, this being a strictly anonymous competition. Each drawing or set of drawings shall be accompanied by a plain, opaque, sealed envelope containing the name and address of the designer.

The adviser alone will have access to the drawings until they are placed before the Jury of Award. No drawing, whenever received, will be shown or made public until after the awards by the jury.

The drawings shall be securely wrapped, either flat or in a strong tube not less than 2 1/2 inches in diameter, and addressed to Harold E. Hunziker, Contest Adviser, P. O. Box 313, Niles, Mich., postmarked before midnight September 1, 1946. They shall be sent postpaid.

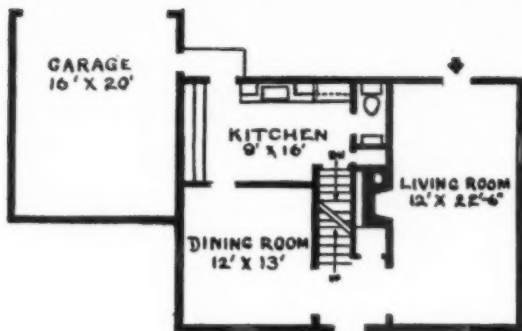
JUDGEMENT: The judges will be selected from each region, and announcements of those selected will be published in the American Nurseryman at a later date.

ANNOUNCEMENT OF THE AWARDS: After awards have been made, the announcement of the winners will be made in the American Nurseryman. Prize checks will be mailed as soon as possible after the judging.

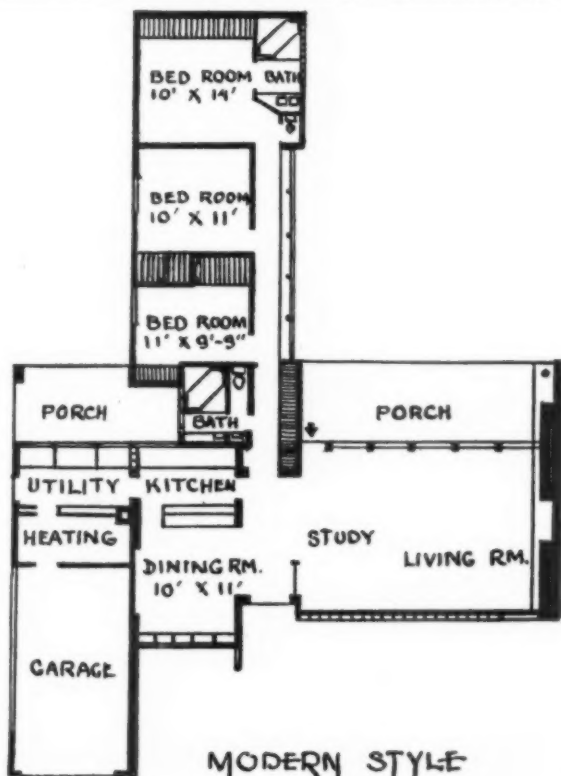
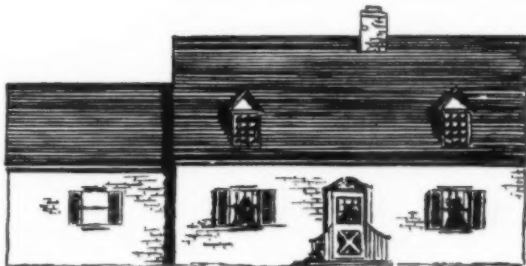
The selection of the awards by the judges shall be final. Should no entry present a meritorious solution to a given problem in any region, the judges may make such award as they deem suitable, or no award, on that particular problem.

All plans submitted shall become the property of the American Nurseryman. Rights are reserved to publish any or all plans submitted in this contest.

[Ranch house and modern house designs reproduced by courtesy of the Chicago Tribune, from entries in its recent prize home competition. Ranch house, by Edward L. Burch, Jr., Evanston, Ill. Modern house, by Joseph C. Gora, Jamaica Plain, Mass.]



CAPE COD



MODERN STYLE



DRAWINGS BY
C. E. BOLTON

On and Off the Nursery

By L. C. Chadwick

START OF SERIES.

With this issue is instituted a series of short, timely articles dealing with nursery, landscape gardening and arboricultural practices which should prove interesting and informative to the readers of the American Nurseryman. It is hoped that time will permit the preparation of regular contributions under this heading. No continuity will be attempted with these contributions, but for the most part they will be timely. In some issues, a single subject will be discussed; in others, two or more subjects may be considered. While the writer does not profess to be an authority on all phases of the nursery—landscape—arboricultural business, an attempt will be made to answer, as time and space permit, questions readers care to submit.

SEEDS OF WOODY PLANTS.

In my nursery visits it is not uncommon to find unsatisfactory results with seeds of several woody plants. In an attempt to determine the reasons for such results it has been found that while conditions may vary considerably in different nurseries, three or four factors or conditions are usually the underlying causes. These factors or conditions are (1) failure to recognize the parts of the seed that may cause delayed germination, (2) failure to give the proper treatment to overcome the resting condition in the seed, (3) failure to sow the seeds at the proper time and (4) loss due to damping-off of the seedlings.

The parts of the seed that may be responsible for delayed germination are the seed coat, the endosperm or food storage organ and the embryo. These seed parts may act in various ways. The seed coats may be so hard that the young embryo plant cannot force its way through it; the coat may prevent the absorption of water and oxygen necessary for germination, or it may prevent the escape of carbon dioxide from within the seed, which in sufficient quantities will become toxic to the embryo.

The endosperm may become hardened and act in much the same way as the seed coats in preventing germination; it may contain a substance that is toxic to growth of the embryo, as appears to be the case with iris seeds, or it may be so weakly

developed that sufficient food for development of the embryo is lacking.

The embryo may not be completely developed when the seed is gathered, such as is true with *Ilex opaca*, *nandina*, *ginkgo* and others, or there may be a condition within the embryo that causes the seed to remain dormant.

The nurseryman may experience considerable difficulty in determining into which of these various categories the various seeds fall. In the end it comes down to knowing the characteristics of the different seeds and how they react to germination. I do not know of any one publication available at the present time that will give this information in a brief and concise form. Experience will have to be the teacher.

Methods for treating seeds to overcome the factors or conditions causing delayed germination can be briefly outlined. Hard seed coats and endosperms can be overcome by such practices as scarification, use of sulphuric acid or boiling water, or by stratification in a moist medium at temperatures of 60 to 70 degrees Fahrenheit for periods of one to three months. Stratification and the use of boiling water are the most practical methods for the nurseryman to follow in handling small quantities of seeds. Immature or incompletely organized embryos will develop in two to four months when sown at favorable germinating temperatures. Where a definite resting condition exists, it can be overcome by stratification at a temperature of approximately 40 degrees for one to three months. Delayed germination of many of the shrub and tree seeds is caused by a combination of factors such as a hard seed coat and a resting condition of the embryo.

SEEDS OF RED CEDAR.

One of the seeds with which nurserymen experience difficulty in getting a satisfactory and uniform germination is the eastern red cedar, *Juniperus virginiana*. The factors responsible for delayed germination with red cedar are the waxy coat and a resting condition of the embryo. Removal of the waxy coat can be accomplished by soaking for several hours in alcohol or by pouring warm water over the seeds and bringing the water to a boil. As soon as the water is brought to a boil, pour it

off and repeat the operation three times.

The resting condition of the embryo can be overcome by stratifying the seeds in flats of moist sand and peat and holding them at a temperature of about 40 degrees for three months. Holding the flats in the nursery storage cellar should be satisfactory. Germination of red cedar seeds is best at temperatures of 50 to 55 degrees. It is considerably retarded at temperatures above 65 to 70. This means that early sowing, following the stratification period, when the soil is below 60 degrees, is essential for rapid germination. The seeds should be sown so that a month will elapse before the soil temperature goes above 60 degrees. This early sowing will also aid in reducing loss from damping-off.

In summary, to get rapid and satisfactory germination of red cedar seeds, remove the waxy coat, stratify about December 15 to January 1 and hold at a temperature of 35 to 40 degrees until March 15 or April 1, when they should be sown in well prepared seedbeds of sandy soil.

L. C. C.

SALUTE LANDSCAPERS.

The hundreds of men and women engaged in landscape work were honored April 1 by the one-hour radio show, Valley Forge Caravan, from KYW, Philadelphia, which nightly salutes one of America's industries, under the sponsorship of the Adam Scheidt Brewing Co., Norristown, Pa.

Host for this performance was Richard P. White, executive secretary of the American Association of Nurserymen, who told of the landscape industry's contribution to the war effort, which included assistance to the army engineering corps in camouflage work and to the United States Department of Agriculture in carrying out the successful victory garden program. He also told of the postwar plans for nation-wide improvement and beautification through landscaping.

MR. AND MRS. JOHN ROBERTS, of the Roberts Nurseries, Denver, Colo., recently returned from a six weeks' trip, which took them through several southern states. Mr. Roberts has turned the management of his 35-acre nursery over to Bert G. Clark, formerly of Alamosa, Colo., who has an option to buy the nursery. Mr. Roberts, who started in business in 1920, has virtually retired from active participation.

Plan A. A. N. Victory Convention

To the convention-bound members of the American Association of Nurserymen and their guests, heading for Miami Beach in July, the sunlit sands, shady palms and cool ocean breezes of the nation's leading resort city will offer ample ingredients for mixing business with pleasure.

Swimming in the blue-green waters of the Atlantic, golfing under sunny skies, boating along the inland waterways, fishing in the Gulf Stream—these are a few of the attractions available for relaxing moments between business sessions. And when the day's business is done, the trade winds sweeping steadily in from off shore bring the promise of cool, restful sleep.

With accommodations for 50,000 visitors, Miami Beach can compete with the country's largest cities in handling conventions. It offers a superb year-round climate, averaging 75.2 degrees. Contrary to popular conception, the temperature seldom rises above 90 degrees in July. For that month the mean maximum has been 86.7 degrees, according to United States Weather Bureau records, and the mean minimum 76.4. Last year the sun shone 213 hours in July, and there were only six cloudy days in that month.

To visiting members, their families and guests, the city of Miami Beach offers free use of its two sporty golf courses; Bayshore and Normandy Isle, during their convention. Flamingo Park, main recreational center, has facilities for numerous sports. Several of the many night

clubs in Miami Beach remain open through the summer months to provide first-class dinner and supper shows. Shopping along Lincoln road, where the nation's most famous shops display next year's styles, is a special attraction for the ladies.

In order to provide ample facilities on beach-front hotels, reservations have been made for A. A. N. members at four prominent hotels—Ritz Carlton, Shelborne, Georgian and National. Each hotel is a luxury hotel such as one would expect to

of rooms for the A. A. N. and as soon as that number is taken reservations must be made at another hotel.

The two special trains, of which account has appeared in previous issues, will arrive in Miami, Sunday morning, July 14, and the passengers will be transported to their respective hotels at Miami Beach. Convention registration will be made on the trains, by R. P. White on the New York train and by W. J. Smart on the Chicago train, in order to get that job done before arrival. Registration will also be done in the lobby of the Ritz Carlton.

Meetings are scheduled for July 14 of the Ornamental Growers' Association and the Wholesale Fruit Tree Growers' Association. July 15 will be held meetings of All-America Rose Selections and the National Association of Plant Patent Owners.

The convention sessions of the American Association of Nurserymen will open Tuesday, July 16, at the Ritz Carlton hotel. Wednesday will be entirely open for recreation. General meetings will be held Thursday, concluding with a banquet in the evening. The special trains will depart at midnight for Chicago and New York.

Arrangements have been made for bus trips on Monday and Tuesday mornings and afternoons for those who wish to take them to points of interest in Miami, including Hialeah race track, the Parrot Jungle and other places. Smaller parties can be taken by limousine to the Fairchild Gardens or other more distant points.

On the morning of July 17 it is planned for all convention visitors



Ritz Carlton Hotel.

find in that resort town. Each has its own private swimming pool, which will be available to A. A. N. members, and each hotel has offered free of charge two cabanas to serve as a sort of headquarters for the nurserymen. All four hotels were taken over by the army during the war and have since been completely reconditioned and reequipped. "We have never obtained such luxury as we shall have this coming summer," asserted Richard P. White, A. A. N. executive secretary, after his winter trip to Miami Beach in February to make convention arrangements.

Rates for the Ritz Carlton and the Shelborne will be \$6 single and \$8 double, and for the Georgian and National, \$5 single and \$7 double. All reservations will be made through the Washington office of the A. A. N. and will be forwarded to the hotels in blocks. An attempt will be made to give the convention visitors the hotel of their choice, but this cannot be guaranteed, as each hotel has set aside a certain number



National Hotel.



Shelborne Hotel.

Discuss Pest Problems

CENTRAL PLANT BOARD HOLDS ANNUAL MEETING.

to take the Nikko-Wofford cruise about Biscayne bay, obtaining a view of the entire beach front from the water. The afternoon will be open for fishing for those who care to go. A golf tournament has been arranged at the Bayshore Golf Club, with complimentary greens fees; it will not be a regular golf tournament, but featured with many trick awards. There is also the possibility, July 17, of a charter airplane trip to Cuba via Pan-American Airways.

The Ladies' Auxiliary is expected to hold a meeting Monday morning, July 15, at which Guy W. Ellis, vice-president of the Lincoln Road Association, will tell of the shops on that famous thoroughfare, a majority of which will be open during the summer. Afterward the ladies can visit the shops at their convenience, as all four hotels are clustered at the beach end of the road.

BULB GROWERS ORGANIZE.

Sixty-nine southern bulb growers met March 23 at Macon, Ga., and organized the Southern Bulb Growers Cooperative. Temporary officers are Dr. H. D. Wilson, Albany, Ga., president; D. M. Maxwell, Monroeville, Ala., vice-president; Ray A. Bowden, Athens, Ga., secretary, and Grady Wright, Dublin, Ga., treasurer. The directors are S. P. Cooper, Sebring, Fla., and, from Georgia, G. L. Lanier, Decatur; J. A. Ennis, Ogeechee; Z. Whitehurst, Statesboro; G. P. Whatley, Sr., Forsyth; H. I. George, Swainsboro, and Mrs. Mary Lee Brantley, Tennille.

A meeting of the board of directors was scheduled for April 6 at the University of Georgia to complete the charter and bylaws and to set up a bulb growers' program that would function by September 1. After 1946 all bulbs and flowers of members will be marketed through this cooperative.

GYPSY MOTH QUARANTINE.

Revision of federal quarantine 45, on account of the gypsy moth and brown-tail moth, was made by the United States Department of Agriculture, effective March 18. The change in the regulations affects only the list of plant materials exempted from regulation.

LAST month the Kenmore Garden & Feed Store was opened at Seattle, Wash., under the management of Keith Miller. A complete line of garden tools, seeds, fertilizers and shrubbery is carried.

The Central Plant Board held its annual meeting at the Hotel Kingsway, St. Louis, Mo., March 25 and 26, with representatives from the federal bureau of entomology and plant quarantine and from the American Association of Nurserymen, and officials engaged in plant regulatory work from twelve of the thirteen north central states taking part in the program. South Dakota alone was not represented. There was a registered attendance of twenty-nine. Dr. Carl J. Drake, Ames, Ia., opened the meeting with an address of special interest to the nursery industry, published in this issue, and presided at all sessions.

Topics discussed and speakers included the following: "Current Entomological Problems," by Dr. P. N. Annand, Washington, D. C.; "Observations on Plant Pest Control," by John W. Baringer, Washington, D. C.; "Report of the Gypsy Moth Hearing in June and National Plant Board Conference in February," by C. A. Boyer, Lansing, Mich.; "Barberry Eradication Problems," by Ray O. Bulger, Minneapolis, Minn.; "Reports Review" and possibilities for a nursery inspector's manual, by Dr. R. C. Smith, Manhattan, Kan.; "Glaucolus Inspection Requirements," by H. F. Seifert, Glen Ellyn, Ill., and a report on the use of DDT concentrates applied by airplane in the control of gypsy moth, by R. A. Sheals, Washington, D. C.

A plant regulatory clinic led by E. L. Chambers, Madison, Wis., and participated in by a number of the delegates took into account various items not provided for in the general program and proved of such interest and value that it bids well to become an important part of future meetings. Kansas reported several changes in regulations, including rescinding of European corn borer and potato tuber moth quarantine, modification of cedar-apple rust quarantine, and active cooperation with the federal bureau of entomology in eradication of the common barberry in black stem rust control.

The evening banquet held at hotel headquarters was highlighted by the presentation of a Sheaffer lifetime fountain pen to T. L. Aamodt, St. Paul, Minn., in recognition of his services as former secretary-treasurer of the Central Plant Board. Following the presentation, John W. Bar-

inger gave a most interesting and instructive talk on the relationship of the nursery industry to plant pest control. Prof. A. G. Ruggles, a charter member of the board and former state entomologist of Minnesota, now retired and residing at Union Springs, Ala., was an honored guest.

L. M. Gates, Lincoln, Neb., was named chairman of the committee on recommendations to the National Plant Board. In the absence of W. A. Price, chairman, the report of the uniform regulations committee was read by Howard G. Tilson, Lexington, Ky.

The Central Plant Board favored the resolutions adopted by the National Plant Board at its recent conference held at Washington, D. C., urged that the present officers arrange for the publication of a nursery inspectors' manual, highly commended Ray O. Bulger and his co-workers in the federal bureau of entomology and plant quarantine for the great progress being made in eradication of common barberry and expressed appreciation to those who took part in the program. Special appreciation was extended the committee on local arrangements, consisting of L. E. Adams, J. Carl Dawson and J. A. Denning, chairman.

Dr. Carl J. Drake, Ames, Ia., and Dr. J. A. Munro, Fargo, N. D., were reelected president and secretary-treasurer respectively. It is planned to issue a mimeographed report of the proceedings.

J. A. Munro, Sec'y.

LINCOLN WAY NURSERIES, Cashtown, Pa., specializing in fruit and ornamental stock, has been started by Harry F. and John D. Biesecker, both recently released from the army.

FRED WILSON, son of Harold W. Wilson, proprietor of the Wilson Garden Service, Jacksonville, Fla., has been discharged from the navy and will enter the business, taking over the wholesale and shipping department. Having served in the navy since December, 1942, Mr. Wilson was an aviation radioman first-class at the time of his discharge and holds the Asiatic-Pacific ribbon with three battle stars, the Air medal with two gold stars, the American campaign ribbon, the Victory medal, the air crew insignia with three stars and the Philippine liberation ribbon with two stars. He was with Torpedo Squadron 11 of the navy air corps.

Present-day Quarantine Emergencies

By Carl J. Drake

The objectives of this conference, as you are aware, are to consider questions of plant inspections, plant quarantines and plant regulatory work, especially problems relating to the work of the states forming the Central Plant Board. Many of the problems coming up for consideration at this conference extend beyond state lines and are regional or national in scope. Others project beyond the borders of our country and are thus international in magnitude. Trade between the states and commerce with other nations directly or indirectly affect every state in the Union. In other words, many of our plant regulatory problems are national and international in scope.

The solution of plant regulatory problems is not a simple matter. State and regional problems are often quite complex, whereas international and national problems become more involved and intricate in their solution. It is largely a federal function to handle quarantines and regulatory matters affecting interstate trade and commerce between nations. As state laws and quarantines do not extend beyond our respective state borders, cooperation between states and with the federal government becomes almost obligatory.

The objectives and functions of the regional and national plant boards are well known to state and federal officials. The boards are not lawmaking nor law-enforcing bodies. However, the decisions and recommendations of the plant boards are far-reaching, and, as a rule, are very useful and helpful in many ways. Much has been accomplished in the past through the concerted and intelligent action of the plant boards.

Unfortunately, the general public is often not very familiar with plant quarantine and regulatory work. Some individuals and groups of citizens look upon state and federal plant quarantines and regulations with considerable apprehension for various reasons. Some of these apprehensions and differences are justified and could be easily eliminated by concerted and intelligent action of quarantine officials. The reasons and need for such action, and also for a better understanding of the objectives and accom-

plishments of plant quarantines, are obvious to us, but not always clear to some of the people whom we serve.

No problem transcends the need for revising, modifying and lifting of plant quarantines and regulations not based on sound, biological data. The three words, "sound, biological data," form a very catchy phrase and may be employed for exactly opposite purposes, especially if the information is not clear cut and well understood. The latter sentence brings up again the question of the pressing need for more research to settle differences and

ture from plant foes. The slowness of action on the part of plant regulatory officials and lawmaking bodies to meet new conditions is sharply illustrated by the great development and expansion of aircraft and watercraft during World War II. What should be done to secure adequate funds and increased personnel to meet these new developments in travel and changes in commerce? It is plainly evident that some plant pest laws will need to be modified or changed, also the modernization of the inspection methods and techniques.

Insect pests and plant diseases are carried from one country to another in many divers ways. Inspection and certification under the best conditions are never 100 per cent perfect, because of the human limitations of the men carrying on the work. This same statement applies equally well to human diseases, for typhus, dysentery and other plagues have occasionally slipped through the quarantine lines in spite of the best effort of medical men. The few failures in either of these fields are insignificant in comparison with the large numbers of pests and serious diseases intercepted and stopped at our borders. Perhaps not enough publicity has been given to the plant pests intercepted at the ports of entry by federal and state inspectors. Such publicity might bring a little criticism from some foreign countries, but in the end it would help secure better public and more financial support for the work.

It is impossible to predict with much certainty what an insect or a plant disease will do in a different environment in a new country. Many of our worst crop pests at the present time are of foreign origin. When discovered in the United States, a considerable proportion of them were of very little or no economic importance in their native country, and almost totally unknown. It is, therefore, plainly evident that foreign plant quarantines designed to protect American agriculture might be a complete failure, if based upon the literature and present known status of the insects or diseases in their respective foreign homes. Cognizance of these facts, and many others, must be recognized and fully taken into consideration by both federal and state officials. There is no middle ground nor such a thing as a compromise measure as a substitute for facts



Carl J. Drake.

to eliminate unnecessary confusion now present in regulatory work. This maze is not entirely limited to the states, because a little confusion exists between federal and state officials, between federal departments and between nations. Needless to say, the critics of regulatory work sometimes take advantage of petty differences and foggy decisions. Quarantines should be established solely on biologically sound data with the reasons and objectives of the regulations clearly stated. There are many good, sound reasons for plant quarantines and for regulating the movements of carriers and hosts of injurious insects and plant diseases, both domestic and foreign.

It is a well known fact that plant pests are introduced (largely incidentally) into new countries through the travels and commercial activities of mankind. Commerce changes and develops much faster than plant quarantines designed to protect agricul-

Address on "Some Present-day Plant Quarantine Emergencies," by Dr. Carl J. Drake, Ames, Ia., president of the Central Plant Board, at its meeting, March 25, at St. Louis, Mo.

in the promulgation of plant quarantines. The use of compromises and such inept excuses as "good will" simply leave wide open many avenues for foreign pests to gain entry into our country. The present status of a few of the many exotic insect pests and plant diseases firmly established within our borders, such as the Japanese beetle, white-fringed beetle, Dutch elm disease, San Jose scale and alfalfa weevil, most vividly illustrates this point. The European corn borer, Oriental fruit moth, Hessian fly and dozens of other insect pests take a heavy annual toll of our agricultural and horticultural crops. The total loss from foreign pests in America, together with the cost of research, extension and control work, represents a staggering sum of money. And the damage and loss from these foreign invaders will not stop at the end of this year, or next year. In other words, there will be no V-J day for plant growers.

The European corn borer now has the spotlight in the corn belt states. The farmer has a perfect right to ask, what was the cash value of the broom corn that brought us the corn borer from Europe? The same questions may be asked regarding other foreign insects and plant pests now firmly established in the United States. Should not more serious consideration be given to the protection of farmers, nurserymen and fruit growers from the present dangers of importing exotic pests? Is there not too much official emphasis in Washington at the present time on the catchy phrase "good will" between nations at the expense and subservience of American agriculture?

Another question of consequence comes up for thoughtful consideration: "Who is capable of singling out the insects and plant diseases of the various countries of the world that might or would become serious pests in the United States if just given a mere chance?" One should be mindful of the fact that some of these potential plant pests are totally unknown and do not have a common or scientific name. The Oriental fruit moth (*Grapholitha* (*Lasheyresia*), *Molesta*), was not described until after it was discovered in the United States. In addition, five of the six species of white-fringed beetles of the southern states were not described until after these insects were found infesting our crops in the south. The writer has also described two new species of South American insects recently intercepted at two different United States ports of entry. The United States is a large country and there are many kinds

of habitats—tropical, subtropical and temperate. Biotic and physical conditions are varied and suitable for growing many kinds of crops. Our climates and fertile soils not only produce bumper crops, but also at times insects in countless myriads. Compare the European corn borer and Japanese beetle problems as they exist in their respective native countries with these problems in America. Not much money has been spent on research, control and quarantines of these two insects in Europe and Asia.

Plans are well under way for a great expansion of our foreign trade in the immediate future. The much faster and greatly increased transportation facilities have changed the commercial picture. Distances are now measured in hours or days instead of weeks or months. Improved methods of refrigeration also come strongly into the picture. Fresh fruits, fresh vegetables and other plant products from Africa, Europe, Asia, South America and other parts of the world may be imported from the most distant countries into the central states or any state in the Union in less than a week. It now takes a refrigerated railroad car longer to travel across the United States than it does a refrigerated transport plane to reach the United States from South America or most countries beyond the seas. It seems safe to predict that within three or four years a transport plane will leave either east or west coast and arrive at the other coast in half of the present record-breaking time.

At the present time ports of entry are not entirely confined to the states bordering the oceans and adjoining Canada and Mexico. Many large air bases were built at strategic spots throughout the entire world during the past war. Others are now being constructed in many foreign countries. The size and speed of aircraft are increasing by leaps and bounds. We may soon see rocket planes coming in and landing before the noise of their approach in the distance can be heard. This speedy travel means better fresh fruits, better fresh vegetables and better plant products of all kinds from almost every country in the entire world. Vast changes are also being made in watercraft commerce. The exchange of goods or commerce between nations will be on a much faster and larger scale than during prewar days. And unless more drastic protective measures are taken, we may expect more new pests and new plant diseases for our growers to combat. These statements apply equally well to the pest of man and farm animals as well as plants.

There has been some letdown in plant regulatory activities and pest control work during the war, largely because of shortages of materials and trained men. These difficulties are now slowly straightening out. In many cases the immediate difficulty will now be an increase of funds and larger staffs. Salaries, traveling expenses and other costs are much higher and still going up. Both state and federal appropriations will need to be materially increased (1) to meet higher salaries, labor and other costs, and (2) to employ larger staffs, because of the increase in foreign commerce. The defense against the introduction of new plant pests from foreign countries must not only be maintained, but greatly strengthened by passing new laws or modifying present laws and securing appropriations adequate to meet the present changing national situation. The federal program is our program and, as in the past, close co-operation is needed between state and federal plant quarantine officials.

In writing pest laws and plant quarantines, too much stress has been placed for years on nursery stock and not enough on "carriers" of injurious insects and plant diseases. This statement seems to apply almost equally well to both state and federal laws and quarantines. The word "carriers" should come more strongly into the picture, for it includes plants, plant materials and plant products, soil, and any living or dead thing capable of harboring serious plant pests. Quarantines should be worded so that the inspectors will be able to meet effectively any new or unexpected emergency in their routine work.

Quantity limits should be based and governed to some extent by the facilities and manpower of the various ports of entry. When the attendant pest risk is great and cannot be adequately safeguarded by treatment, limitation or even total exclusion is a biologically sound action. Adequate federal laws are needed to meet all emergencies as they arise in foreign plant quarantine work.

As previously stated, inspection is not a perfect safeguard because of the human factor. Perhaps more stress should be placed on fumigation, especially when the attendant pest risk cannot be safeguarded by inspection or the bulk is too great for manual inspection. Viruses and other degenerating diseases sometimes make it highly desirable for field study and inspection during the growing season in the country of origin. Neither inspection of dormant plant materials nor fumigation at the port of entry will give any insurance against the

(Continued on page 45.)

Winter Identification of Olive Family

By Leon Croizat

To begin our work without taking in either too little or too much, let us turn to the pages of Rehder's classic "Manual of Cultivated Trees and Shrubs" and see what its pages list for the oleaceae in cultivation. Here it is: Olive family, or oleaceae—thirteen genera: Fontanesia, abelophyllum, fraxinus, forsythia, syringa, ligustrum, phillyrea, osmarea, siphon-osmanthus, osmanthus, forestiera, chionanthus, jasminum. To get rid of this unlucky number, we will throw olea in the lot and close the score with a neat fourteen, and nothing left behind.

Of these fourteen genera, six are of major importance, fraxinus (ash), syringa (lilac), ligustrum (privet), forsythia (golden bell), jasminum (jasmine), olea (olive). The first is valuable both as a shade tree and as a source of high-grade lumber, and the last, which is also sparingly cultivated in this country for its fruits, is an important economic tree in the regions of the Mediterranean. Fraxinus, syringa, ligustrum and forsythia are grown pretty much all over the world with the exception of the tropics. Olea is not seen where winters are cold or rains abundant. Jasminum is essentially tropical or subtropical, though one of its species can be grown on the Atlantic coast under

protection as far north as southern New England.

This tabulation makes it clear that the oleaceae are an important group. Before dealing with them in detail, then, let us take a look at their members in general.

The oleaceae are said to be estipulate, meaning that the base of their leafstalks, or petioles, is shorn of such petty appendages as occur in the rose and bittersweet families. The lack of stipules is an important character which readily separates the oleaceae from the madder family (rubiaceae), for instance, in which stipules—and often large ones—are invariably present. These organs are exceedingly interesting both for the professional botanist and for the lover of plants who has an inquisitive turn of mind, and, were it possible, I would gladly state something of them in general right here. Unfortunately, I am bound to remain strictly within my subject, merely saying that stipular structures can be traced back both in jasmine and forsythia, as we shall duly see. The olive family, consequently, is estipulate by derivation rather than as a primitive condition.

Insofar as the cultivated forms are concerned, the inflorescence of this family can be said to consist of comparatively delicate branchlike structures carried immediately above the leaves. The basic pattern, then, calls for a leaf and a lateral floriferous branchlet in alternation (figure 1, A), the twig itself always ending with a normal vegetative bud. It is well for us to understand this pattern, for it occurs modified in various manners which are all important from the standpoint of horticulture. Nothing seems to be so wide apart in the kingdom of flowers as the heavy head of lilac that blossoms in late April or May and the cascade of the golden bells of forsythia which flare all along the shoot at the first suspicion of springtime. Few will think at first of associating the tiny flowerlike inflorescence of forestiera with the graceful wands of privet, yet all this can be accounted for as simple modifications of the fundamental pattern I have just described. This pattern is in evidence in olea and osmanthus, for example, but even in these plants it may be found altered now and then to some extent. We shall readily understand the nature of the change if only we suppose that the

flower-bearing shoots crowd all together toward the tip of the twig (figure 1, B) and that the leaves underneath them are reduced to simple scales. When this takes place, the twig itself loses its vigor as a vegetative structure, and a heavy cluster of flowers comes into being which ultimately crowns the whole shoot. This, of course, is the normal inflorescence of lilac, and very nearly that of privet, and is secured by a gradual modification of that of olea and osmanthus.

In ashes, golden bells and forestieras the flower clusters are basically arranged like those of olea and osmanthus, but are incased within buds of their own on old wood. In forsythia only one flower may come out of every bud, while whole clusters of them are the rule in ash. In forestiera the flower cluster may be surrounded by yellow enlarged scales, and since this flower cluster is quite small, it usually gets mistaken for a flower, which it certainly is not.

All this, which I can only sketch roughly here, is of practical value for horticulturists and those who attend to pruning. Cases are on record to show that the nature of the inflorescence affects the commercial yield of the olive tree. A rational understanding of these structures, moreover, is also of some importance for winter identification, because the fruits which linger on into the cold season are always borne in the manner which is peculiar to the flowers.

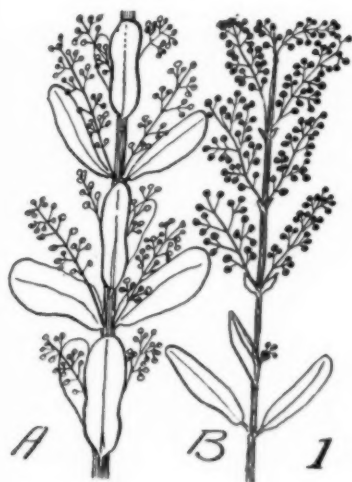


Fig. 1.—Inflorescence of olea type (A, schematic): Each leaf bears a cluster of flowers above, and the shoot has continuous vegetative growth by an apical bud. Inflorescence of syringa type (B, schematic): The clusters of flowers tend to crowd at the tip of the shoot, the leaves being reduced to scales. All the upper part of the shoot dies down after fruiting.

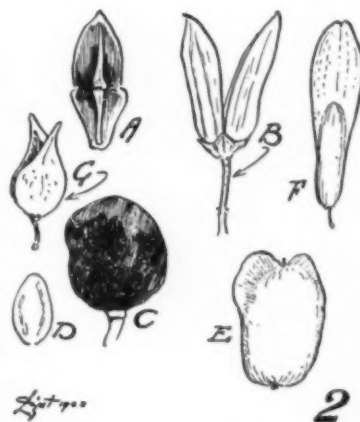


Fig. 2.—Fruits in the olive family: A, B, capsule of lilac, seen open from above and sidewise; C, olivelike fruit of privet, the stone in D; E, key of fontanesia; F, key of ash; G, capsule of forsythia.

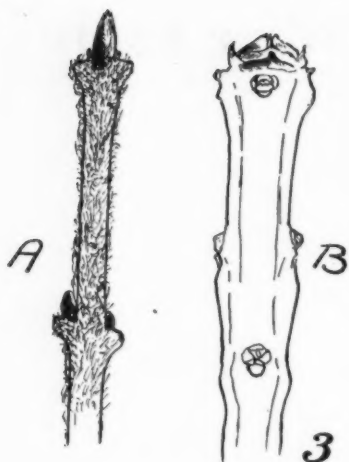


Fig. 3.—Shoot of *Ligustrum obtusifolium regelianum*, Regel privet in A; shoot of *Chionanthus virginicus*, fringe tree, in B.

I might add, before dropping the subject for the time being, that the bewildering array of inflorescences seen in nature can at all times be brought back to elementary principles of structure. The factors to be taken into account are always three: (1) Position—where the inflorescence is borne; (2) time—whether it is borne on new wood or on old wood; (3) form—how the inflorescence itself is put together. These factors are simplicity itself once they are properly understood, but nothing can be understood if they are confused in the first place, because picking an inflorescence apart is not unlike dismantling an engine for convenient crating. The job has got to be done properly by somebody who knows how the engine runs, and in how many sections it can be packed best. No competent manager will ever be caught flat-footed misinterpreting any one of the basic requirements of his job, and the skilled instructor in plant identification will always carefully reckon with these three elements, position, time and form. It is my earnest opinion, as a matter of fact, that the student should be acquainted first of all with the operation of these factors and then—and only then—be given the usual definitions of inflorescence. These definitions handed out alone work sometimes at a great discount, and those who cannot figure the business in and out eventually feel that they are being shortchanged somewhere.

The fruit most commonly found in the cultivated oleaceae has all the essential characters of the edible olive, which is anything but surprising. This olive bears only a tiny scar at the upper end by the fallen style, for, as we know, the oleaceae bear

their floral wrappers attached below the ovary which later develops as the fruit. The privet, for example, brings forth black or black-bluish berries with a single hard stone (figure 2, C and D), which tend to remain in place throughout the winter. Dry fruits which bear no resemblance whatever to the standard olive also occur in this family; witness the two-valved capsule of the lilac (figure 2, A and B); the capsule of forsythia (figure 2, G), which—unlike the lilac's—is narrowed at the tip and enlarged at the body; the most characteristic key of the ash (figure 2, F); the wafer-like key of fontanesia (figure 2, E), a mere modification of that of ash. All these dry fruits tend to remain in place during the winter with the exception of those of the ash, which are shed earlier. In this genus, however, the bare inflorescence, the female especially, may be left standing for long months.

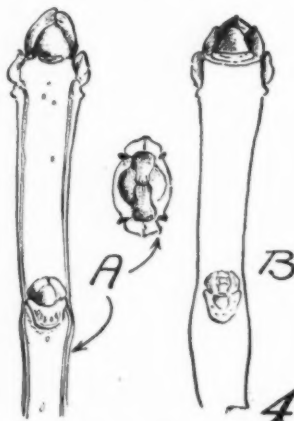


Fig. 4.—Shoot of *Fraxinus quadrangulata*, blue ash, in A, right-hand side the apical bud seen from above; shoot of *Fraxinus americana*, white ash, in B.

Having disposed of the most pressing generalities, we may now clear our desk of the details. These are so many that we can do no more than to review the most important.

Five of the cultivated genera—*phillyrea*, *osmarea*, *siphonosmanthus*, *osmanthus* and *olea*—are evergreen, and as such do not interest us particularly. All I might say is that an evergreen shrub or tree with opposite leaves tending to be longer than broad and without a marked venation is likely to belong to the oleaceae. These leaves may be entire, as they are in *phillyrea*, *olea* and *Osmanthus americanus*, or toothed, as they are in the remaining evergreen forms and in *Osmanthus ilicifolius*, but they are opposite or nearly opposite in every case. The last species mentioned could most readily be mistaken for

the common evergreen holly but for the position of the leaves, which settles matters forthwith. *Osmanthus americanus* might be confused with a rhododendron on account of the shape of the blade, but, again, in the latter the leaves are alternate or whorled and not opposite. *Siphonosmanthus delavayi*, practically the lone cultivated species of the genus, may be disposed of with the comment that it resembles an evergreen privet with rather finely toothed leaves and large berries.

Abeliophyllum is a horticultural curio with leaves that suggest those of the privet, but unlike this plant, it bears a flat fruit like *fontanesia*, has storied pith and mostly carries two superimposed buds. *Fontanesia* is once more reminiscent of privets, though its branchlets tend to be quite slender, and mature specimens retain here and there—when not all over—the peculiar inflorescences typical of the genus. These form a comparatively long and ragged cluster of a kind that might be compared with the “whiskers” of ashes in a less advanced state of degradation. The truth is best served by stating that these plants will be identified by those who have seen them much more readily than by those who have read a chapter-long description of all their characters. The same is pretty much true, alas, of privets, of which certain species—witness *Ligustrum lucidum* and *Ligustrum japonicum*—are definitely evergreen, while others are—to quote good authorities—deciduous, persistent or half-evergreen depending upon climate, location and kind. If berries are left, the identification is easy as to genus, and even when no berries are available tolerably good guesses can be made on the twig. The bud scales are usually two and pointed (figure 3, A), the leaf scars rather prominent, and the wood of the year finely hairy in cer-

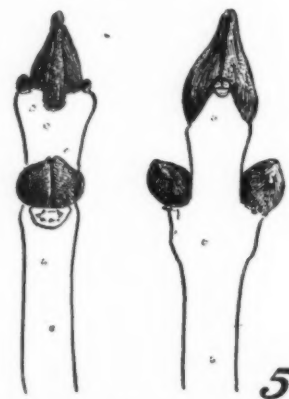


Fig. 5.—Shoot of *Fraxinus pennsylvanica lanceolata*, green ash.

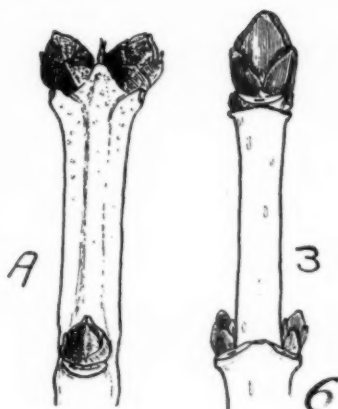


Fig. 6.—Shoot of *Syringa vulgaris*, common lilac, in A; shoot of maple, *Acer campestre*, in B. Notice the ridge connecting the opposite leaf scars.

tain species (e.g., *Ligustrum obtusifolium* and *Ligustrum amurense*), but glabrous in others (e.g., *Ligustrum ovalifolium*). These characters, coupled with the opposite leaf scars, the wiry slenderness of the year's vegetative shoots and the dull gray to olive color of the bark, make it fairly easy to identify the genus, but going beyond this is risky business for anybody who has not studied privets thoroughly and does not know how to judge from the standpoint of many intangibles. *Forestiera* has the stiff growth of privet, with branchlets sometimes ending in spines, and these two characters, together with the comparatively light brown color of the bark, make it possible to identify it in a leafless state. All in all, the winter identification of these forms would be hopeless business if it were not for the fact that there is little else in cultivation with opposite leaves and comparatively slender young wood. The characters are negative in the long run, and it is the flower which counts most, and the fruit next. The rest is easy for those who have seen it already, though—let us repeat—the opposite leaves or leaf scars are excellent characters as a start.

The ashes in cultivation are numerous, running well over thirty different species. Their buds are quite changeable as to color, and so is the young wood, and it may happen that the same species varies in these respects in different sections of the country. Most peculiar is the blue ash (figure 4, A) with its corky ridges and its upper bud scales often retaining the outline of the leaflets, but since I have discussed this species in a previous article devoted to the identification of the rue family I shall no longer spend time with it here. In other ashes, the bud scales

either tend to taper to a narrow tip, as they do in the green ash (figure 5), or end with a scar, which is the case (figure 4, B) with the common white ash. This scar marks the spot where the leaflets once stood, which can still be seen in place in the blue ash. In all ashes the bud scales tend to be four, the two larger overlapping the smaller crosswise, but two scales also occur. These scales are covered by what might be described as a peculiar hairy dust. This covering strikes the eye as something intermediate between delicate felt and finely ground coffee, which is an odd combination indeed; it may be black, dark brown or grayish, and the midrib of the outer scale may be almost free from it altogether. Exotic ashes, or some of our own from drier sections of the country, have slender twigs sometimes, but in the majority of cultivated trees the twigs are rather stout and slightly swollen in the region of the leaf scars. Cast against

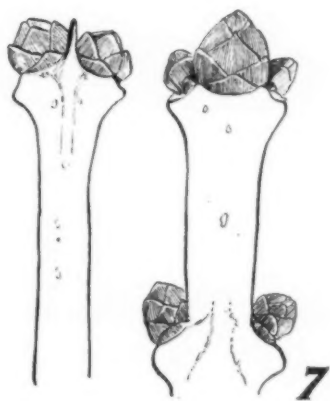


Fig. 7.—Shoots of *Syringa amurensis*, Manchurian lilac.

the sky, these twigs are most revealing in their pattern and bearing, and are far better than the bark as winter character. The shrubby chinonanthus has the buds of ash (figure 3, B) in the main, but coarser and with broader scales.

The lilacs are a world in their own right, and a very variable one at that. The bud scales of the commonly cultivated form are the usual four, quite glabrous and varying in color from pale yellow-green to dark purple. The buds are borne either in pairs at the tip of the twig or single and, when paired, retain between them either an abortive bud (figure 6, A) or a section of undeveloped twig (figure 7, left-hand figure), both of which may fall, leaving behind a scar in this case. It is easy to mistake a shoot of lilac for one of maple in winter, but a good character is

there to separate them, if we know it. In a lilac the leaf scars run down as barely perceptible wings, but in a comparable maple they are connected on the contrary (figure 6, B) by a transversal ridge, which is a reminder for us that the maples not only were stipulated in the night of the ages, but still show it to a far greater degree than do the modern lilacs.

The large Manchurian lilac (figure 7) could easily be confused with a cherry on account of its bark, and, in part, buds, which are of various shades of brown, but no cherry ever has opposite leaves. For the rest, lilacs are legion, and fifty pages could easily be written on their winter identification if space permitted. To get out of this predicament, let us say that a twig with opposite leaf scars which suggests a stout privet, but has a brown-colored bark without the ringing scars of certain maples, stands a fair chance of belonging to a lilac other than the one most common in cultivation. This is rather too broad to be of much value except as an introduction to the subject, and I shall not assume responsibility for the details, either. Unfortunately, nature can be approached only in two ways, (1) by giving all the facts, or (2) by pointing out how the facts can best be learned. The former being forever impossible, the latter remains as the correct solution, whether we like it or not.

The winter jasmine, *Jasminum nudiflorum*, is the hardiest of its clan, and its twigs are easily identified.

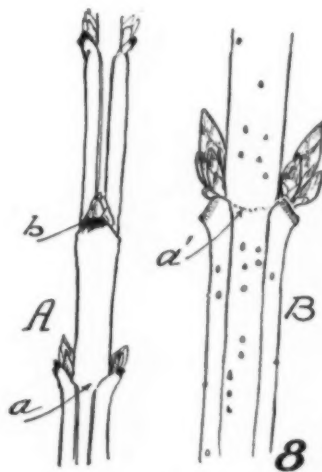


Fig. 8.—Section of shoot of *Jasminum nudiflorum*, winter jasmine, in A, with ragged leaf scar and buds concealing scales in b. The leaf scars do not come together in the region a. Section of shoot of *Forsythia intermedia*, border golden bell, in B. A ridge connecting the leaf scars may occur in a'.

They are smooth and green to begin with (figure 8, A), and the leaf scars run down the stem, forming clean-cut ridges or wings, which run mostly parallel and do not come close. The buds may be three or more in each leaf axil (that is to say, the hollow formed by the foot of the leaf meeting the stem), but the lateral two may well happen to be concealed from sight (figure 8, A, b) by a large scale. In the commonly cultivated, but much more tender white jasmine, *Jasminum officinale*, the ridges formed by the leaf scars tend to meet at the joints and may even be connected throughout by a thin transversal line in the region marked a in figure 8, A. Characteristic of these two species is the fact that the leaf does not break away from the stem, forming a clean scar. Moreover, it is the enlargement of the sides of this ragged leaf scar which causes the ridges or wings to come near together in the white jasmine. This species has in the main the same type of wood of *Jasminum nudiflorum*.

Forsythia is not unlike jasminum in certain respects, but (1) the wood is yellowish to brownish and warty; (2) the leaf scar is clean-cut; (3) the buds may be four, when not more. Characteristically, in this genus a thin line is sometimes seen (figure 8, B á) connecting the opposite leaf scars, which is a relic of the formerly existing stipules. Tenuous as this character rates with us, it cannot be neglected if we teach winter identification. It makes less true the current definition given of the olive family as estipulate (that is to say, wanting stipules) and tends to support the contention of some cytologists to the effect that forsythia is among the oldest forms of this group of plants. The acanthus and benne families (acanthaceae and pedaliaceae), both well represented in cultivation in the tropics and warm temperate regions, are best separated, as a matter of fact, by the presence, or absence, of this revealing transversal line between the leaf bases. There is more here than hits the casual eye, or that I may now write about, and this something cuts indeed deep.

MILTON BOCK HEADS NURSERY.

Milton Bock, who for more than thirty years had been associated with his father, Clarence Bock, in the Clarence Bock Nursery Floral Co., Burlington, Ia., now is president of the firm. Clarence Bock has retired from active participation in the business and has turned the management

FRUIT TREES AND FRUIT PLANTS						
APPLE	2 to 3 ft.	1-year Whips	4 to 6 ft.	2-year Branched		
	20c ea.	3 to 4 ft. 30c ea.	40c ea.	3 to 5 ft. 35c ea.	4 to 6 ft. 50c ea.	
Bonum	200	300	150	200	100	
Delicious	300	500	500	...	...
Dbl. Red Delicious	500	1000	3000	...	...
Dbl. Red Duchess	...	...	...	200	300	
Early Harvest	50	50	...	300	300	
Early Red Bird	100	...	...	150	100	
Fall Pippin	...	...	...	100	50	
Hyslop Crab	...	...	...	150	100	
Jonathan	...	...	...	100	100	
Lady	...	...	...	100	100	
Liveland Raspberry	...	...	...	150	75	
Lodi	500	300	...	100	...	
Lowry	500	800	1500	...	...
Macoun	...	...	...	200	300	
Maiden Blush	...	...	...	...	...
M. B. Twig	...	100	400	...	...
Newtown Pippin	...	100	...	200	100	
N. W. Greening	200	...	...	100	150	
Paragon Winesap	...	...	...	75	100	
Red June	...	...	...	...	50	
Smokehouse	...	50	...	200	...	
Summer Rambo	50	100	50	150	100	
Sweet Paradise	...	...	...	100	300	
Winesap	300	800	600	...	...
Winter Banana	...	...	...	300	200	
Yellow Transparent	400	500	...	200	400	
PEACH						
	18 to 24 ins. 15c ea.	2 to 3 ft. 20c ea.	5/16-in. 25c ea.	7/16-in. 35c ea.	9/16-in. 50c ea.	11/16-in. 60c ea.
Afterglow	50	200	200	100	50	50
Belle of Ga.	...	500	300	600	...	...
Brackett	800	1000	...	...	...	...
Curran	...	...	50	300	100	...
Champion	...	...	300	200	100	100
Elberta	10,000	8000	6000	1000	2000	1000
Early Elberta	400	...	...	...	...	...
Fireglow	75	300	300	100	50	50
Gage Elberta	300	200	100	...	...	...
Golden East	50	200	250	120	100	...
Golden Jubilee	300	600	100	100	100	...
J. H. Hale	1000	1000	800	...	...	...
Heath	20	50	50	300	200	...
Hiley	300	400	200	100	100	50
Indian	600	100	...	...	...	...
Slappy	50	50	50	50	50	...
South Haven	150	300	100	350	100	50
Stump	50	100	50	100	100	...
Triogem	50	100	150	100	100	...
Vedette	100	100	100	300	50	...
PLUM						
	2 to 4 ft. 70c ea.	2 to 3 ft. 50c ea.				
Abundance	...	...		
Burbank	...	75	200			
Damson	...	300	500			
Red June	...	100	100			
Wickson	...	200	50			
MISCELLANEOUS FRUITS						
APRICOT, 100, 3 to 4 ft., 85c; 250, 2 to 3 ft., 60c.						
NECTARINES, 300, 4 to 6 ft., 85c; 200, 3 to 4 ft., 65c; 300, 2 to 3 ft., 50c.						
GRAPE, 2-yr., assorted varieties, \$2.50 per 10.						
WAYNESBORO NURSERIES, INC.						
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over to his son. Milton Bock is the fourth generation of Bocks in the nursery business.

The Bock business was founded in the 1850's by Jerome Bock. His three sons, Ernest, Joseph and William, entered various divisions of nursery and greenhouse business, with Ernest operating the nursery. Ernest's son, Clarence, spent more than fifty years conducting the business and now plans to spend his time fishing.

ROOTING WHITE HIBISCUS.

Recent experiments on methods for rooting the white hibiscus show that a physiological separation of two factors is necessary for the formation of roots on cuttings. According to J. van Overbeek and L. E. Gregory, reporting on these experiments in the American Journal of Botany, the Ruth Wilcox hibiscus, the difficult-to-root white-flowered form of hibiscus, will form abundant roots if a shoot of the easy-to-root red hibiscus is grafted onto the white form, provid-

ed the base of the white cutting is treated with auxin. While the Ruth Wilcox hibiscus does not respond to regular treatments of auxin, the grafted hibiscus shoot is incapable of producing roots without additional auxin.

The two factors necessary for root formation on the white hibiscus cuttings were shown to be auxin and a factor, or complex, in the leaves of the red hibiscus. The downward transport of the leaf complex of the red hibiscus takes place through the bark and is not strictly rectilinear. Further research will tell whether the root-forming effect of the red hibiscus leaves is hormonal, nutritional, or both.

NORMAN B. McLEOD and Elmer Jochim are the new owners of the Robertson Boulevard Nursery, 1619 Robertson boulevard, Culver City, Cal. Mr. McLeod formerly taught agriculture in Los Angeles schools, and Mr. Jochim has studied agricultural problems extensively.

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Catskill, Dorsett, Fairfax	.50	1.50	2.75	10.00

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Cumberland (black), No. 1	\$1.00	\$2.00	\$6.00	\$50.00
Latham (red), No. 1	1.00	2.00	7.00	60.00
Newburgh (red), No. 1	1.00	2.00	6.00	50.00
St. Regis (red), No. 1	1.00	2.00	6.00	50.00
Sunrise (red), No. 1	1.00	2.00	7.00	60.00

BLACKBERRY PLANTS

Blowers, No. 1, R. C.	\$1.00	\$2.00	\$6.00	\$50.00
Alfred, No. 1, R. C.	1.00	2.00	6.00	50.00
Eldorado, No. 1, R. C.	1.00	2.00	6.00	50.00

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BOYSENBERRY PLANTS

	10	25	100	1000
1-yr., No. 1	\$1.00	\$2.00	\$6.00	\$50.00

THORNLESS BOYSENBERRY PLANTS

1-yr., No. 1	\$1.10	\$2.25	\$7.00	\$60.00
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HALL'S HONEYSUCKLE

	10	100	1000
2-yr., No. 1 grade	\$2.00	\$18.00	\$150.00

SILVER LACE VINE

	10	100
2-yr., No. 1 grade	\$4.00	\$35.00

NORWAY MAPLE

	10	100
Nicely branched, well shaped trees		
6 to 8 ft.	\$12.50	\$90.00
8 to 10 ft.	15.00	125.00
10 to 12 ft.	22.50	200.00

LOMBARDY POPLAR

	10	100
Field-grown, branched trees.		
2 to 3 ft.	\$1.75	\$10.00
3 to 4 ft.	2.25	15.00
4 to 5 ft.	2.75	20.00
5 to 6 ft.	3.50	30.00

WISCONSIN WEEPING WILLOW

	10	100
8 to 10 ft.	\$15.00	\$125.00
10 to 12 ft.	17.50	150.00

GREEN-LEAVED BARBERRY

	10	100
2 yr., 12 to 15 ins., branched seedlings	\$1.25	\$10.00
2 yr., 15 to 18 ins., branched seedlings	1.50	12.50

FORSYTHIA INTERMEDIA and VIRIDISSIMA

	10	100
12 to 18 ins.	\$2.00	\$15.00
18 to 24 ins.	2.50	20.00
2 to 3 ft.	3.00	25.00

SYMPHORICARPOS RACEMOSUS and VULGARIS

	10	100
18 to 24 ins.	\$2.25	\$18.00
2 to 3 ft.	3.00	25.00

BUNTINGS' NURSERIES, INC.

Box 3

Selbyville, Delaware



CHARLIE CHESTNUT

WILD HAWG



"The trouble is with that dog of yours, Red, he's overtrained," says Emil. We had stopped in at Red's filling station on the way back from town one Saturday afternoon last fall during the bird season. Red was sitting back of the stove picking out cockle burrs off a moth-eaten setter. Red didn't say nothing so Emil continued. "I never seen a dog like him, Red, when Doc and me was walking the big slough this morning, that dog come to a point and Doc says to me, 'Take it easy, Emil, looks like Dan has found a covey of birds.' Me and Doc sneaked up slow with our guns ready expecting to get up some birds and all Dan was interested in was a couple of field mice. He had them pointed real good. He's overtrained, Red, that's what he is. Who trained him anyway, Red, you ought to get your money back."

"In the first place, Emil, since when did you get to be an expert on hunting dogs? This here is a high class dog. He's got papers."

"Papers my eye, Red, they don't give out papers on nothing but pure bred dogs. If he's got papers I'll eat the papers myself. Lets see them."

"All I got to do is send in. The papers is \$20.00 extra so I didn't bother. I got this dog for a bargain, only \$10.00 on account of his back end is weak. Just wait until I build him up a little. Why should I spend money on papers on a \$10.00 dog?"

"Got time for a little three-handed, Red?" Emil says. "I'll play you for one of them 3-cent cigars you got in the case there labelled 12 cents."

"Can't do it, Emil," Red says, "I got to grease Morses Buick this P. M. Morse wants it by 5 o'clock, only I got to get some of these burrs out first."

"Well, Chas.," Emil says, "lets get on back to the nursery. By the way, Red, keep your eye open for a good tree dog. There's coons back there in the River bottoms by the old gravel pit. Let me know if you hear of a good tree hound, Red."

A couple of days later we had a phone call from Red. "You still want that dog, Emil?" Red says. "There's an old Model A out here with a couple of rods burned out. Man and his wife and 5 kids are heading for Michigan. There's a Arkansas license on the car. Now here's the proposi-

tion, they're stuck here at the station and from what I make out they are down to a couple of dollars and two dogs. One is a tree dog the gent says, genuine blue tick, and the other is a good all around dog. He'll sell either dog or both. He needs money to get rolling again. If you're interested come on down right away."

"I'll be down in a few minutes, tell him to wait there, Red. I got to see the dogs first. I might take both dogs if they look good to me," Emil says.

"Get the truck, Chas., I might make a deal for a couple of dogs that is if they look good. They got to be good though."

The man from Arkansas hit it off with Emil right away. "If you got a place where the old lady and the kids can set up our tent overnight, I'll show you what that dog can do," he says to Emil. "That there is what you call a real tree dog."

"One time he got on the trail of something and followed it all night. I heard him bark away off but I couldn't keep up with him. Along toward daylight I heard him heading back and something went past me like a flash as I was sitting there taking a rest in the woods. That dog was so smart he waited until he was right in a draw in back of my shanty, and then he treed the biggest wildcat I ever seen. He tucked that cat out in an all night run and treed him right at my door. That's what I call a tree dog, mister."

"Is he good on coon?" Emil says. "That's the thing. Coons is what I'm going after."

"If I was to tell you about coon hunting with this dog and his mother that I worked with him, say—"

Just then a hatchet faced woman stuck her face out of the car. "Luke," she yelled, "I'm tired out a'sitting here waitin'. You get this contraption going or me and the younguns will light out on foot."

"Twant take long, Lucy, just you rest there till I make me a deal," Luke says to his wife.

Luke turned to Emil. "I got to get that car fixed so we can drive it. I run short of money, otherwise I wouldn't sell that dog to my own pappy."

Emil was thinking. I could tell he

was studying the situation over in his mind. Finally as I predicted to myself in the first place, he says to me, "Charlie, back the truck around in front here and we will tow this outfit out to the nursery. There's more room to work there and Luke can set up the tent until he gets the car fixed."

"You all run a tree nursery?" Luke asked. "That's funny, I'm sort of a nurseryman myself. I don't grow the stuff but I pull trees out of the woods. I ship it out. One time I run onto a thicket of Redbuds and shipped a carload of them."

Now all of the members which are acquainted with Emil can see there wasn't a chance to shake Luke off of Emil. He is a sucker for trades and also at this time he was in a sweat to get a new hunting dog. Emil was riding with me in the truck. "It wouldn't hurt to have a carload of Redbud, Chas., to sell at the convention. I will go to work and make a deal to clean up. Before I buy any dogs I got to try them out first. According to the moon this is a good night for coons."

Emil was talking mostly to himself as we towed the old car full of Luke and his family, his camping outfit and two dogs all squeezed into and tied onto an old Model A tudor. I pulled up by the corncrib and stopped.

"There's a good spot to pitch your tent, Luke," Emil says, pointing to a level place between the windmill and the corncrib. "Its right handy there to the well."

Before I got the truck packed those boys of Lukes had the tent up and they were hollering for something to eat. "Mind if I send a couple of the boys out for rabbits. We'll be needing a little meat for supper." Luke asked Emil.

"Go ahead out in back of the barn there, but I aint seen a rabbit all fall," Emil says.

"There's where my all around dog comes in," Luke says, "he'll scare up rabbits even if there aint any."

Before I started for home those two boys was back with three rabbits and two hen pheasants. Emil was real pleased about the performance of the dog in scaring up game but he made a hasty dive for those pheasants. "This aint pheasant season, and beside its closed on hens

anyway. If you get caught with them birds it will be mighty expensive meat."

"Down home we dont pay no attention to the regulations, that is if we are up against it for meat," Luke says. "Get the feathers off them birds boys and keep your eyes open."

"Its a funny thing, Luke," says Emil, "but I aint seen a rabbit all fall. I thought they was all gone."

"I wouldnt give a dang for any dog that couldnt scare out a few rabbits any place. That dog is a all around dog. He can get birds or he can run a squirrel or anything thats good eatin. I trained him not to monkey with anything a body cant use for victuals."

Emil was always cautious in making a deal so he didnt make any passes for buying the dog, just then. "Maybe tomorrow we can go out with that dog, Luke, so I can see how he works. If he works good for me, I might make you a offer on him."

I went on home leaving Emil and Luke discussing the merits of pointers and setters and all around dogs. Next morning when I got to work Emil and Luke was about ready to start out and Emil asked me to go along. There was also two of Luke's oldest boys so there was quite a party.

All went fine for the first hour or so. That dog chased up more game than I knew was in our part of the country. Emil was getting anxious to make a deal. "I'll tell you what I'll do, Luke," says Emil. "I got a lot of parts for Model A cars. I will go to work and furnish the parts and help you to get your car running and I wont charge you nothing for camping on my land. Maybe I could throw in some potatoes and some milk and \$2.00 in cash. I'll give you that deal on the hunting dog. Then we can make another deal on that tree dog, a separate deal, Luke."

"Might take quite a few parts to fix my car," Luke says. "Sounded to me like the whole insides was falling out but if you will get it fixed to run again and give me a little help with the victuals, I'll let you have that dog."

"All right, Luke, we'll call it a deal," Emil says. He was so pleased with himself, he give me a wink. "Chas," he says to me, "remember you didnt think much of it when I brought home them two old Model A wrecks thats sittin there behind the greenhouse. Luke ought to get enough stuff there to make a new car."

We made quite a walk that afternoon and worked on down toward the swamp up the river. The dog

DORMANT STOCK IN STORAGE

Stock listed is in storage and available for immediate shipment. We suggest that you wire or telephone your orders. All stock listed is subject to prior sale.

HEDGING

SPIRAEA VANHOUTTEI		CALIFORNIA PRIVET	
	Per 100 Per 1000		Per 100 Per 1000
18 to 24 Inches	\$14.00 \$120.00	2 to 3 ft., 4 canes	\$10.00 \$90.00
12 to 18 inches	10.00 90.00	18 to 24 ins., 3 canes	8.50 75.00
6 to 12 inches	7.00 60.00	12 to 18 ins., 3 canes	7.00 60.00
		6 to 12 ins., 2	5.00 45.00

APPLES

2-yr.-old Grafts, branched		1-year Whips	
	Per 10 Per 100		Per 10 Per 100
11/16 inch and up	\$6.50 \$60.00	4 to 5 ft.	\$4.50 \$40.00
9/16 to 11/16-inch	5.50 50.00	3 to 4 feet	3.50 30.00
7/16 to 9/16-inch	4.50 40.00	2 to 3 feet	2.40 20.00
5/16 to 7/16-inch	3.20 28.00	18 to 24 inches	1.80 15.00

	11/16- in.	9/16- in.	7/16- in.	5/16- in.	4 to 5 ft.	3 to 4 ft.	2 to 3 ft.	18 to 24 ins.
Anoka	250	625	...	50	60	60	70	20
Red Delicious	...	540	600	80	45	25	25	...
Dark Red Delicious	20	1900	1450	1100	250	80	65	...
Yellow Delicious	185	150	270	70	70	65	20	...
Grimes Golden	225	900	650	380	85	50	100	20
Haralson	...	50	190	80	80	100	20	...
Jonathan	...	2000	2200	800	125	80	175	...
Dark Red Jonathan	...	350	1100	630	50	50	70	15
Red June	75	175	90	45	4	5	5	...
Transcendent	70	80	40	15	35	...	20	...
Whitney	200	40	140	45	200	80	80	10
Winesap	...	295	580	535	10	15	60	...
Yellow Transparent	...	...	350	490	400	295	387	25
York Imperial	95	90	125	25	...	5	15	...

CHERRIES

	Per 10	Per 100
5/16 to 7/16-inch	\$5.50	\$50.00
2 to 3 feet, whips	4.50	40.00
18 to 24 inches	3.50	30.00
12 to 18 inches	2.40	20.00

	5/16- in.	2 to 3 ft.	18 to 24 ins.	12 to 18 ins.
Early Richmond	150	380	200	285
English Morello	10	...	65	...
Kansas Sweet	...	125	175	...
Montmorency	400	200	100	300

HANSEN BUSH CHERRY

	Seedlings	Per 100
18 to 24 inches	...	\$9.00
12 to 18 inches	...	7.00

GRAPES

	Per 10	Per 100
CATAWBA		
2-yr., No. 1	\$2.40	\$ 2.00
1-yr., No. 1	1.80	15.00
1-yr., No. 2	1.20	10.00
CONCORD (Per 1000)		
2-yr., No. 1	\$125.00	1.80 15.00
1-yr., No. 1	65.00	.85 7.50
FREDONIA		
2-yr., No. 1	2.10	18.00
1-yr., No. 1	1.70	14.00
1-yr., No. 2	1.00	8.00
MOORE'S EARLY		
2-yr., No. 1	2.10	18.00
1-yr., No. 1	1.70	14.00

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Ampelopsis tricuspidata veitchii (Boston Ivy)		Per 100
3-year, No. 1, transplants, 2 to 3 feet	...	\$45.00
2-year, No. 1, transplants, 18 to 24 inches	...	35.00
2-year, medium, transplants, 12 to 18 inches	...	30.00
Wistaria sinensis (Purple Chinese Wistaria)		
Grafted Plants, 2-year, XX	...	45.00
Grafted Plants, 2-year, No. 1	...	35.00

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picked up a scent and let out a war whoop and away he went.

"Know what he's on now?" Luke says. "Its only one thing when he makes a fuss like that. Its wild hawg. That what it is, wild hawg. He's trained special on razor backs down home."

"Aint no wild hogs around here, Luke," Emil says, "must be badger or something, I seen one down here in these bottoms years ago."

"Nope, you cant fool that dog, he knows a wild hawg," Luke says.

By that time them two boys of Luke's was out of sight and the dog was still running with that unearthly howl. In a few minutes we heard a shot and after while one of the boys come back over the hill. "Looks like a 400 pounder, Pop," the boys says. "When we caught up that dog had a death grip on that hawg's hind leg. Maw will sure be glad to get a little side meat. She's tired of rabbits."

"You boys has shot somebody's tame hog, thats what you done and now we will all be in for it. Anybody see you shoot?" Emil says. "Better leave the hog lay and get out of here."

"How far back is she from the road, boys?" Luke asked. "Drag her over in the brush and we'll run down after dark and pick it up. Wild hawg is mighty good eatin, Emil."

We worked on back to the nursery and Emil was in a sweat all the way. "Wonder who's got hogs down in that swamp, Chas?" he says to me.

When we got back to the office, Emil was really worried and he kept a weather eye out to see if anybody was driving in with the sheriff. He had cooled down quite a bit on the deal for the dog.

Luke's family was all packed up and ready to leave. "Whats the idea, Lucy, apacking up thataway?" says Luke. "We aint got the car fixed yet."

"There wasnt nothing the matter with the car, Pop," one of the boys says. "The oil pan was hanging by one bolt and all the oil drained out. It was the oil pan dragging that made all the noise. We bolted it back on and we found some oil there in back of the shed and we're all ready."

"Well what do you know," says Luke, "then I dont have to sell the dogs after all." Before Emil could think of what to do next, they was all loaded in and driving out.

For several days afterward there was a lot of talk around about somebody butchering one of old man Morsee hogs, just cutting out the loins and leaving it lay.

Emil was into the bank one day

talking to Morsee. "Believe me, Mr. Morsee, if I ever hear hide or hair of who done that I would tar and feather him. Its a fine situation when a persons property aint safe right here in Riverbend. I'll sure let you know if I should find any clues on it," says Emil, as he walked out.

START GLADIOLUS TRIALS.

W. Ray Hastings, Harrisburg, Pa., secretary-treasurer of All-America Seed Selections and of All-America Rose Selections, Inc., has been appointed honorary vice-president and counselor of the New England Gladiolus Society, which held its national gladiolus conference this spring at Michigan State College, East Lansing, with over 100 in attendance.

The New England Gladiolus Society and affiliated societies are sponsoring national trials for the testing and evaluation of new seedling varieties in similarity to the All-America Selections. Three trial grounds have been established and are starting operation in 1946. Dr. C. E. Wildon, of the department of horticulture at Michigan State College, is in charge of the trials at East Lansing, which are directly sponsored by the Michigan Gladiolus Society. Dr. C. J. Gilgut, chairman of the board of trustees of the New England Gladiolus Society, will conduct the trials at the Waltham experiment station, Waltham, Mass. The third location this year will be under the supervision of Ralph J. Pommert, Pacific, Wash., in connection with the Washington experiment station at Puyallup.

Entries may be made at all or any of these trial grounds until May 15, the closing date for receiving entries. Other trial grounds, representing climatic and geographic sections of the country, will be added in the future until they will be national in scope and coverage.

It is expected that the gladiolus trials will soon be an excellent guide to the trade and to the public on the most worthy and satisfactory new varieties to offer and to plant, as now there are about 150 introductions annually.

Mr. Hastings had conducted gladiolus trials for H. C. Hastings Seed Co., Atlanta, Ga., before his fifteen years' experience with the All-America trial gardens.

TEN NEW DAY LILIES.

Ten new day lilies developed by Dr. A. B. Stout, curator of education and laboratories at the New York Botanical Garden, were named and described by him for the first time in the April, 1946, issue of the Journal of the New York Botanical Garden.

They are August Orange, Blanche Hooker, Caprice, Fantasia, Fiftieth Anniversary, Firebrand, Georgia, Manchu, Viking and Rose Gem.

All were chosen for exceptional vigor, hardiness, form and color after years of study and experimentation with nearly 1,000 seedlings. Dr. Stout has now bred, named and described

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Per 1000
Seedlings—Thorny and
Thornless
2 to 3 mm. \$ 5.00
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Cuttings

3 to 4 mm. 10.00
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CELASTRUS SCANDENS,

Per 1000

Seedlings
1-Yr., No. 1. \$25.00

AMPELOPSIS VEITCHI

Each

1-Yr., Heavy
12 to 18 ins. \$0.15

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fifty-nine horticultural clones of *hemerocallis*.

None of the new day lilies are available, however, at the New York Botanical Garden. A limited number of the clones may be obtained from the Farr Nursery Co., Weiser Park, Pa. By a long-standing arrangement with the garden, that concern has been given the right of propagation of all clones selected from the garden's experimental plot.

Of the ten 1946 selections several merit special distinction for their color and form. Blanche Hooker has often been called the best red of all the seedlings in bloom at the New York Botanical Garden in late May. Fantasia has widely spreading petals and sepals, with pale and dull red tints over greenish-yellow, offering a two-toned pattern.

Fiftieth Anniversary, named for the garden's founding in 1895, is a handsome large flower of orange-red. The petals are marked with ox-blood red, and the throat is tinged with green. Georgia is an unusual pastel combination of pale rose and buff, while Viking is a tall plant of good foliage with flowers of orange-red.

F. A. TREECE has purchased the Edgewater Nursery, Goshen, Ind., from Simon Brouwer.

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Robinson	1.50	10.00
Dunlap	1.30	8.00
Gem (Ever.)	2.00	15.00
Minn. 1166 (Ever.)	2.50	20.00

300 of one variety at 1000 rate.

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Plant Notes Here and There

By C. W. Wood

There are bread-and-butter bell-flowers, such as *Campanula carpatica* in variety and *C. persicifolia* in variety, some of little interest to anyone except botanists, of which *C. cristocalyx*, as I have had it, is an example, and then there are a host of others which would give a decided fillip to the specialist or the neighborhood grower with clientele of seekers for the unusual. One of the latter is the Caucasian beauty, *C. mirabilis*.

Although a monocarpic species, it commands attention by its sheer beauty. Parenthetically, a monocarp should hold little if any terror for the gardener or grower. We never think of discarding Canterbury bells because it dies after flowering. Why, then, should we fear others of that class? The advent of *mirabilis* into gardens was as thrilling as is the beauty of the plant. Chroniclers of horticultural history tell us that just one plant of the species ever has been found, and that only one capsule of viable seeds was on that plant. From these few seeds have sprung all the beauty of which *mirabilis* is capable and all the plants which have since gladdened gardeners.

For description I can do no better than quote Farrer's: "Take a silverless rosette of *Saxifraga cotedon*; stick into it a rather small-flowered, pale blue Canterbury bell spike (about ten inches tall), and you have *C. mirabilis*, the most ancient of all campanulas, a plant almost geologic in its antiquity." As it has behaved here, I should judge that it needs little more than ordinary care; good drainage and a fair amount of moisture at the roots are its principal requirements. In this climate, north Michigan, shade from the noonday sun also seems to help.

Foamflower.

I have been singing the praises of foamflower for more years than I care to remember; yet I find it no more plentiful in nurseries than it was twenty years ago. That is not as it should be, either, for in it, *Tiarella cordifolia* of botanists, we have a plant of many uses both in the landscape and to grow for cutting in the open and under glass. It offers many opportunities for profit in the neighborhood nursery. In fact, if I were located near a good cut flower market, I should explore all of its pos-

sibilities as a cutting item in the greenhouse in late winter and in frames in early spring, knowing that I had an item of sufficient unusualness in that role to command attention.

When foamflower is mentioned, as a landscape plant, we usually find stressed the fact that it sends up 6-inch or taller, usually much taller, stems, each bearing terminal racemes of creamy-white foamflowers. That is a distinguishing mark, of course, of the plant—the character which reminded Miss Jekyll "of foam tossed aside by a mountain torrent"—but that does not represent half the plant's value as a landscape ornament. Its greatest charm to me lies in its broadly ovate, lobed, serrate leaves. These are a pretty green throughout spring and early summer and then commence to take on various shades of bronzy-red, a condition that is sure to result in rich moist soil in cool shade. Years ago there was offered a form with purple flowers, which I suspect I would not care for, but I once saw a lovely salmon-colored flower and other variations are mentioned, including one with maroon blooms.

It is a most accommodating plant, adapting itself to almost any soil in shade or half sun, but it grows best and gives best leaf coloring in a

moist soil, rich in leaf mold in some shade. These preferences of the plant will suggest many uses in the landscape to observant growers, and its type of inflorescence and blooming period will give hints of numerous combinations in addition to that of foamflower and forget-me-not, which is most often seen in gardens where the subject of our sketch is known.

Elecampane.

When visiting gardens, I always keep my eyes open to see if old-time favorites are present and, if so, how they are used. These mental notes taken over the years reveal many interesting trends. In the case of elecampane, *Inula helenium*, it was disheartening to watch its utter neglect for years after reading the early garden records, in which it is stated time and again that the plant, regarded as a cure-all, was an inhabitant of every garden worthy of the name. A gradual tapering off in popularity is noted down the years until it quite disappeared from gardens except those owned by the lovers of old-time plants.

It is heartening, though, to notice that it is appearing again and that gardeners are beginning to see its value for certain landscape roles. Among these it may be noted that it

RED BARBERRY

2-year transplants

Per 100

12 to 15 ins. \$20.00

15 to 18 ins. 25.00

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STRAWBERRIES

	100	250	500	1000
Streamliner				
New Supreme Everbearer	\$6.00	\$14.00	\$25.00	\$40.00
Minnesota 1166 Everbearer	3.00	6.50	12.00	18.00
Gem Everbearer Crimson Beauty	2.00	4.50	8.00	16.00

RASPBERRIES 1-Yr. Plants

	8.00	18.00	35.00	70.00
Sunrise or Latham Red				
Cumberland Black	4.00	9.50	18.00	32.00

Ask for CATLOG or ORDER DIRECT from AD.

WESTHAUSER NURSERIES, Box F, Sawyer, Michigan

is an imposing object in the wild garden and that it is useful for planting in groups in the shrub border. It is especially useful in the latter role, where its height of five or six feet (even more under good care), big coarse leaves and narrow-petaled yellow flowers make it valuable alike for its August flowering and for its ability to fill in vacant spots in the shrubbery which might otherwise be hard to treat effectively. It is easy to grow from seeds and quite indestructible.

Primula Sieboldi.

Few gardeners seem contented unless they have at least one primrose in their gardens. That is true for a number of reasons, perhaps the most prominent one being the halo which writers have pictured around the name during the years. No doubt the illisiveness of some kinds and the difficulty of culture in a number of species have also had some bearing. It seems to me, though, that some writers have been far too pessimistic about culture in eastern America. Their pessimism certainly has kept a lot of gardeners from trying to grow the plants. And a few trials would undoubtedly prove to them that all is not so dark as it has been pictured.

For instance, they would probably find that the Asiatic, *P. sieboldi*, would welcome their advances. Of the easier primroses, this species deserves special mention, not only because it takes kindly to conditions in the eastern states, but also for the beauty of its best forms. It is highly variable as to color, as all know who have grown it from seeds (incidentally, it is almost as easy from seeds as its near relative, *P. cortusoides*, which you probably know is almost as easy as radishes), varying from entrancing pure white through pink of a myriad shades to rose and rosy-purple.

In the average lot of seedlings there will be some of inferior quality, to be sure, but there will surely be some that will thrill even the most experienced of primula connoisseurs, thrill them not only by size of flower but also for beauty of color. If one gets a pure rose or a pure white of large size, he will have something to dream about. Selected forms may be propagated by division at almost any time of the year.

In this section the plants do best in part shade in a light soil containing an abundance of humus, preferably leaf mold. There they enliven late spring and early summer with a long and brilliant performance, a

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Good assortment of varieties and grades.	Per 100
11/16-in. and up.....	\$60.00
9/16-in. to 11/16-in.....	50.00
7/16-in. to 9/16-in.....	35.00
5/16-in. to 7/16-in.....	25.00

SHRUBS

	Per 1000
<i>Spiraea Arguta</i> , 12 to 18 ins.....	\$100.00
<i>Spiraea Arguta</i> , 18 to 24 ins.....	150.00
<i>Spiraea Arguta</i> , 2 to 3 ft.....	200.00
<i>Spiraea Billiardi</i> , 18 to 24 ins.....	160.00
<i>Spiraea Billiardi</i> , 2 to 3 ft.....	200.00
<i>Spiraea Vanhouttei</i> , 12 to 18 ins.....	100.00

HEDGING

	Per 1000
<i>Barberry Thunbergi</i> , 2-year Seedlings, Branched, 18 to 24 ins.....	\$ 90.00

VINES

	Per 1000
<i>Ampelopsis Veitchi</i> , 2-Med.	\$200.00
<i>Honeysuckle Scarlet Trumpet</i> , 2-1.....	160.00
2-Med.	120.00

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For items not listed above, please refer to our February 20 Bulletin.

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HARDY NATIVE EVERGREENS

Collected Stock
Canadian Hemlock, American
Arborvitae, Balsam Fir

	Per 1000
3 to 6 ins.....	\$ 8.00
6 to 9 ins.....	12.00
9 to 12 ins.....	25.00
12 to 18 ins.....	35.00

Cash please.

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BRIDGETON, N. J.

Write for wholesale price list of
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performance of large heads of flowers on foot-tall stems, over tufts of soft crumpled scalloped leaves.

Phlox Olympia.

If other gardeners have as much trouble keeping their phlox plants (*P. paniculata* varieties) sightly, I wonder how nurserymen sell any stock at all. It may be, though, that their spectacular performance at flowering time so far outweighs their proneness to mildew and other maladies that the shortcomings are overlooked by most. A new variety, Olympia, which I saw in an Ohio nursery last summer gave me hope, however, that better phlox days are ahead of us. There was no indication that the nurseryman had stood over the plants with a sprayer to keep mildew under control, yet they were clothed to the ground with attractive green leaves, a condition that one seldom sees in a phlox planting. Probably its vigor (some plants were four feet tall and five feet is not unusual, it is said) is the foundation of its ability to throw off disease. In any case, it was a fine upstanding plant. Although its flower heads are large, the red-centered white flowers are not so closely packed that it produces the "club" effect of some kinds; on the other hand, it is quite airy and withal a variety of much promise in itself and, may we hope, the forerunner of a race of disease-resistant phloxes.

Creeping Cinquefoil.

Looking at lists of plants for paved walks, one is forced to the conclusion that the planting, or rather the plants, are given more consideration than the traveler who uses the path. If you do not think that is true, try picking your way along a walk whose crevices are filled with plants growing six to eight inches high. Plants for paved walks need careful choosing, it seems to me. In the light of experience, you will probably agree that low-growing plants are needed for the purpose, especially for planting in the center of the walks. At the same time, they must be able to take a lot of punishment from the shoes that trample on them.

All of which leads me to a little cinquefoil, the *Potentilla repens*, obtained from a western dealer several years ago, which seems to fill the bill better than many plants of wider acceptance. For general garden use, it would have little value, but for paved-walk planting it has many virtues. Its stature of an inch answers the requirements of low growth; its finely cut leaves are ornamental

throughout the garden year; a long season of small yellow flowers adds not a little to its attractiveness, and it seems quite indifferent to abuse. The last is of great importance in a plant that has to take the abuse of a paved walk.

The Golden Drop.

During the early 1930's, the golden drop, *Onosma stellatum tauricum*, was to be found in many plant catalogs and in not a few neighborhood nurseries; at present one seldom sees it. That puzzled me for a long time. Certainly, the plant has sufficient virtues to endure it to gardeners after they once know it. To arrive at a solution, I asked a number of growers why they no longer listed it and was told that the plant proved short-lived with them. That is only relatively true, however, and must depend upon local soil conditions, for I have one plant at least that is all of 20 years old, and it is bigger, better and more beautiful than it ever was. It looks to me as though longevity is largely dependant upon drainage and exposure. As one would expect from their hairy leaves, all

onosmas require perfect drainage. That is easily secured in light sandy soil, of course, but if one operates on heavy clay, that is another matter. Then the plant should be grown in specially prepared beds and, when planted permanently in gardens, it should be put in a raised position, as in a wall, where it never has wet feet and will be in full sun.

The plant is worth that trouble, too, not only for its lovely golden drop, strung along 18-inch stems during June and July, but also for its fountains of beautiful silvered foliage. It may be grown from seeds, when available, and from cuttings. The latter, taken soon after flowering and inserted in sand in a shaded frame outdoors, will be ready for lining-out stock the following spring.

Spring Beauties.

As the season of the spring beauty, *Claytonia virginica*, draws to an end, I am reminded that it is an item not often seen in neighborhood nurseries. It probably would never be a heavy seller, because it does not lend itself to extended use in the average garden, but many a gardener, espe-

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Ampelopsis tricuspidata (veitchi) (Boston Ivy)	Per 100	
2-yr. trans., 2 to 3 ft.	\$45.00	
2-yr. trans., 3 to 4 ft.	\$55.00	
Clematis paniculata (Sweet Autumn Clematis)	Per 100	Per 1000
2-yr. medium	\$20.00	\$180.00
2-yr. No. 1	25.00	220.00
Ligustrum amurense (Amur River North Privet)	Per 1000	
12 to 18 ins., 2-yr.	\$70.00	
18 to 24 ins., 2-yr.	90.00	

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cially one who knew the plant in its native state in his young days, would use it if he could find a source of supply. It is, then, one of the minor items which could be used to add a little to the black figures in your account books.

It is not a prepossessing plant when seen in the wild under the fierce competition wildlings often have to contend with. However, transfer it to a good leafy soil in the wild garden or to a dampish shady pocket in the rock garden and see how it picks up, showing the characters which have given it the common name of spring beauty. There is some variation in flower color, a fact which may be taken advantage of by frequenters of spring woods, for the deeply buried corms are easily moved when the narrow succulent leaves commence to turn yellow in May in this section. If one wants a deeper color than any *C. virginica* that I have ever seen, the answer will be found in *C. caroliniana*. But it would be of little use in hot climates, because it seems to be a lover of coolness. As a matter of fact, I think that my section of Michigan is about as far south as it gets in the middle west, though it is found high in the Appalachians much farther south.

The Turfing Daisy.

The turfing daisy, a ferny-leaved plant of a dozen names (they run all the way from *cammaemelum* through *chrysanthemum* to *matricaria* and *pyrethrum*), is a plant of many uses. I suspect, in fact, that you will be pleasantly surprised by the demand for it that a showing would create. It makes a good turf under trees, where few plants will grow with any grace, and in such situations the occasional use of the lawn mower will maintain a perennially green carpet. It can also be used in the paved walk under the same conditions, be it shady or sunny, or it may be relegated to the walk's outer edges and allowed to grow naturally, when its yellow-centered white daisies on 3-inch to 8-inch stems will be ornamental for a long time in spring and early summer. It may be endlessly multiplied from seeds, divisions or cuttings.

WORK has begun on the new Rosedale Nursery at Monrovia, Cal. The new establishment will occupy one full block on Huntington drive between Alta Vista and Mayflower avenues. This will become a retail outlet, with the wholesale nursery on Duarte road.

Lining-Out Stock

Liners from Field Beds	Per 100	Per 1000
Canadian Hemlock, 4-yr., XX, 6 to 9 ins.	\$18.00	\$170.00
<i>Daphne Mesereum</i> , sdlg., 3-yr., X, 6 to 8 ins.	10.00	90.00
<i>Viburnum Opulus Nanum</i> , 3-yr., XX, 6 to 9 ins.	35.00	325.00
Regel Privet, 2-yr., X, 12 to 15 ins.	5.50	50.00
<i>Euonymus americanus</i> , 3-yr., sdlg., 4 to 8 ins.	8.00	80.00
<i>Euonymus coloratus</i> , 2-yr., X, 8 to 12 ins.	12.00	120.00
American Elm, 2-yr., X, 2 to 3 ft.	8.00	75.00
<i>Pachysandra terminalis</i> , 2-yr.	6.00	60.00

Liners, Rooted Cuttings and Seedlings.

<i>Azalea mollis</i> , 1-yr., X	10.00	90.00
<i>Rhododendron</i> , Hybrid, 1-yr., X	14.00	130.00
<i>Euonymus fortunei</i> , R.C.	8.00	70.00
<i>Euonymus carrierei</i> , R.C.	9.00	80.00
<i>Euonymus coloratus</i> , R.C.	8.00	70.00

Regarding Liners: 300 plants of a kind at 1000 rate. 50 plants of a kind at 100 rate. Less than 50 plants of a kind add 10 per cent to 100 rate.

Hardy Perennials

Perennials fresh dug. 1-year plants or divisions from 2 and 3-year plants. All grown in outside field beds. 5 to 24 at 10 rate; 25 up at 100 rate.

	Per 10	Per 100
<i>Achillea roseum</i> , pink-purple	\$1.00	\$ 9.00
<i>Achillea ptarmica</i> , white	.90	8.00
<i>Anthemis tinctoria</i> , yellow	.90	8.00
<i>Catananche caer. alba bicolor</i>	1.00	9.00
<i>Dianthus knappi</i> , yellow	1.00	9.00
<i>Dianthus plumarius</i> , red	.90	8.00
Daisy Mayfield Giant, white	1.20	11.00
<i>Gaillardia Dazzler</i> , orange	1.20	11.00
<i>Hemerocallis flava</i> , dwf., yellow	1.50	14.00
<i>Iberis gibraltarica</i> , lavender	1.20	11.00
Iris, Dwarf Chinese, yellow; white	1.00	9.00
<i>Liatris pycnostachya</i> , purple	1.00	9.00
<i>Lychnis chalcidonica</i> , scarlet	1.20	11.00
<i>Lychnis viscaria splendens</i> , pink	1.20	11.00
<i>Myosotis palustris</i> , blue; dwarf	1.00	9.00
<i>Nepeta musini</i> , blue, prostrate	1.00	9.00
<i>Phlox subulata atropurpurea</i>	1.00	9.00
<i>Phlox subulata rosen</i> , pink early	.90	8.00
<i>Phlox subulata Vivid</i> , deep pink	1.00	9.00
<i>Physostegia virginica</i> , pink	.80	7.00
<i>Pyrethrum superbum rubrum</i>	1.20	11.00
<i>Rudbeckia purpurea</i> , lavender	1.20	11.00
<i>Sedum asiaticum</i> , 10-in., yel.	1.50	14.00
<i>Sedum kamtschaticum</i> , yel.	.90	8.00
<i>Sedum middendorffianum</i> , yel.	.90	8.00
<i>Scabiosa japonica</i> , blue	.90	8.00
Sweet William Salmon Queen	.90	8.00
<i>Thymus citriodorus</i> , lavender	1.00	9.00

Terms: Cash with order; no C.O.D. April and May delivery. Packing and boxing at cost to us, additional. Jap. beetle certified. Certificate upon request.



Azalea Mollis
1-yr. Transplant

Hybrid
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Plan Rose Research

TEXAS ROSE GROWERS MEET FOUNDATION'S SCIENTIST.

Dr. and Mrs. Eldon W. Lyle were reintroduced to Texas rose growers at a luncheon, April 6, at the Blackstone hotel, Tyler. This occasion opened a drive by the East Texas Rose Growers' Association to build membership in the Rose Research Foundation, which will have its inception at Tyler June 1, when Dr. Lyle will resign from his present position as pathologist at the Texas agricultural experiment station to undertake research work on behalf of the Texas rose industry.

Fifty-one persons welcomed Dr. and Mrs. Lyle and heard Jesse D. Breedlove, Sr., outline the early growth of the Rose Research Foundation. Representatives of leading finance institutions of Smith county were special guests.

The association's president, Clark Kidd, emphasized for the visitors the keen interest of the majority of growers in building a stronger and more efficient rose industry. Since publication of the association's newsletter, "Highlights," March 25, the rose growers' association membership had exactly doubled. Mr. Kidd announced there were fifty-two paid memberships, and ample opportunity for expansion was indicated by a state department of agriculture list of 239 Texas rose producers. Of these, some thirty nurserymen grew over 100,000 rosebushes each in 1945. Total production for 1945 was shown to be 9,500,000 plants, far short of the nation's requirements.

First public notice was given of application to the War Assets Corporation by the Rose Research Foundation through the Tyler chamber of commerce and city manager's office for a large cold-storage warehouse presently installed at Camp Fannin, Texas. Nurserymen estimate this facility could store between 1,000,000 and 1,500,000 rosebushes, holding roses from the winter digging season until spring planting season. It would lengthen the marketing period and strengthen wholesale prices, it is believed.

The rose growers' association's biggest project for this year was formation of Rose Research Foundation of East Texas. Jesse D. Breedlove, Sr., was introduced as a vigorous, progressive Tyler nurseryman and rose grower, who with ten other founders was instrumental in setting up the research foundation. Mr. Breedlove's straightforward address

reminded those attending of the obvious necessity for further progress in the science of rose production. The selection of Dr. Eldon Lyle as research pathologist, Mr. Breedlove said, was a choice of the nation's best qualified scientist.

Members of the new foundation will pay from \$1 to \$2 per thousand rosebushes grown during the last nursery year for the research service. The collection and dissemination of scientific information to members will be accomplished as Dr. Lyle sets up a research laboratory, greenhouse and various experimental works on commercial fields in the area. The eleven original foundation sponsors, according to Mr. Breedlove, desired that membership be industry-wide and that every commercial rose grower apply for membership.

Dr. Lyle was introduced as the man charged with curing the industry's ills, a man whose past success with roses earned the confidence of all the country's rose nurserymen. He began his talk by bringing the growers' attention to research opportunities when his work begins June 1. Dr. Lyle demonstrated a thorough understanding of rose production

problems and was able to offer the growers valuable advance suggestions on rose diseases, soils and trimming of understocks.

He concluded his address with projection of Kodachrome slides assembled during his previous rose study, which terminated in 1942. Especially emphasized was the check of rose leaf black spot, cane dieback, and treatment of rose cuttings against nematode and crown gall. Some beautiful Kodachromes were shown of several east Texas rose fields in full foliage and bloom after treatment with copper-sulphur dust, which has become a regular application with progressive growers. By actual tests, Dr. Lyle said, the size of dusted roses of the several varieties tested was increased an average of forty-five per cent over untreated bushes in the same field. Dr. Lyle expressed confidence that an even better treatment could be developed and indicated this would be one of his objectives in early research with the rose foundation.

Guests at the luncheon were Dr. and Mrs. Eldon W. Lyle; Bill Lee, secretary, Tyler Production Credit Association; J. H. Stringer, vice-president, Tyler State Bank & Trust Co.; Joe Roberts, Citizens National Bank, and Mrs. J. C. Ratsek.

From out of town were the follow-

CONTRACT GROWING FRUIT TREES

June Budded Peach, Plum and Apricots, Fall 1946

Cherry, Pear, Peach and Apple, 2-yr., 5-N-1, Fall 1946

Peach, 1-yr., delivery Fall 1947

Cherry, 1-yr., delivery Fall 1947

Combination Apricot, Plum, Peach, all on same trees, delivery Fall 1946.

Either row run, or by grades. Write for prices. State number of each wanted for quotations. Indications are that we will start June Budding May 15 to 20 this season.

TENNESSEE NURSERY CO.

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50 CARLOADS OF EVERGREENS

Large eastern nursery needs this quantity for Spring 1947 delivery.

Must be A-1 stock in good range of variety, medium sizes, properly dug and balled.

Lots of one or more cars acceptable.

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of PRINCETON, N. J.

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Hardy Ornamentals

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Scottsville, Tex.; Mr. and Mrs. Cam-
eron Verhalen, Scottsville; E. V.
Kimbrow, Myrtle Springs, Tex., and
C. E. Wilson, Jacksonville.

Rose growers present from Tyler
and vicinity were Clyde Greene,
B. W. Stanley, Mr. and Mrs. P. O.
Tate, B. L. House, L. C. House, Mr.
and Mrs. Carl Shamburger, Mr. and
Mrs. J. E. Whiteside, J. C. Strick-
land, Mr. and Mrs. Earl Harville,
Mr. and Mrs. Clark Kidd, Mr. and
Mrs. W. G. Atwood, Rusty Atwood,
Mr. and Mrs. Earl Ginn, Mr. and
Mrs. B. L. Ginn, Pat Mackey, Frank
Martin, Mr. and Mrs. L. A. Dean,
Mr. and Mrs. W. L. O'Neal, Mr. and
Mrs. L. B. Dean, Jesse D. Breedlove,
Sr.; Bob Breedlove, Bill Breedlove,
Mr. and Mrs. Bryan McGinney,
Homer Eikner, Mr. and Mrs. J. D.
Roach, Alfred Richardson, C. J. Lau-
den and Bryan Ray.

ROSE REGISTRATIONS.

The following rose varieties have
been registered with the American
Rose Society, according to R. C.
Allen, secretary:

No. 876. Yours Truly, hybrid tea, Germain
Seed & Plant Co.

No. 877. Lady Lou, hybrid tea, Walter D.
Brownell.

No. 878. Purple Heart, hybrid tea, Sequoia
Gardens.

No. 879. Kathryn Gram, hybrid polyantha,
Sequoia Gardens.

No. 880. China Doll, polyantha, Armstrong
Nurseries.

No. 881. Gypsy Boy, Bobbink & At-
kins.

No. 882. Patricia Macoun, climber, Central
Experimental Farm, Ottawa, Ont.

No. 883. Lustrous, hybrid tea (later
changed to Celebrity), E. G. Hill Co.

No. 884. American Flagship, hybrid tea
(formerly registered as Eric the Red), C. R.
Burr & Co.

No. 885. Festival, hybrid tea (formerly
registered as Dixie Dream), Dixie Rose
Nursery.

No. 886. Free Gold, hybrid tea, Walter
D. Brownell.

No. 887. Atomic White, hybrid tea, Walter
D. Brownell.

No. 888. Old Fashion Red, hybrid tea,
Walter D. Brownell.

No. 889. White Wings, hybrid tea, Howard
& Smith.

No. 890. Ming Toy, polyantha, Howard
& Smith.

No. 891. New World, hybrid polyantha,
Bobbink & Atkins.

No. 892. Climbing Festival, climbing hybrid
tea, Dixie Rose Nursery.

No. 893. Mrs. Arnold Burr, hybrid tea,
Arnold Burr.

No. 894. Rosy Glow, hybrid tea, Joseph
H. Hill Co.

No. 895. Orange Therese, hybrid tea, How-
ard Rose Co.

No. 896. Pink Tallman, hybrid tea, How-
ard Rose Co.

No. 897. Spray Cecile Brunner, polyantha,
Howard Rose Co.

No. 898. Climbing Gloria Mundi, climbing
polyantha, Howard Rose Co.

No. 899. Climbing Dagmar Spath, climbing
polyantha, Howard Rose Co.

No. 900. Climbing Crimson Glory, climbing
hybrid tea, Howard Rose Co.

No. 901. Scarlet Glow, hybrid tea, St.
Leonard's Farms.

No. 902. Garnette, large-flowered climb-
ing polyantha, Jackson & Perkins Co.

No. 903. Celebrity, hybrid tea (formerly
registered as Lustrous), E. G. Hill Co.

No. 904. Climbing Heart's Desire, climbing
hybrid tea, Howard & Smith.

No. 905. Hildegarde, hybrid tea, Jackson
& Perkins Co.

No. 906. Enchantment, hybrid tea, E. G.
Hill Co.

BERRY PLANTS

RASPBERRY	Per 100	Per 1000
Newburgh, red	\$ 7.00	\$ 60.00
Sunrise, early red	6.00	50.00
Taylor, red	7.00	60.00

BOYSENBERRY	Per 100	Per 1000
Transplants	10.00	80.00
Tips	7.00	60.00

YOUNGBERRY	Per 100	Per 1000
Tips	5.50	45.00
Transplants	7.50	65.00

SAGE, English broad-leaved	Per 100	Per 1000
2-yr., field-grown	12.00	100.00
1-yr., field-grown	7.50	65.00

HORSE-RADISH (Maliner Kren)	Per 100	Per 1000
Root Cuttings	2.00	15.00
Whole Roots	4.00	35.00

ORNAMENTAL VINES

Celastrus Orbiculata		
No. 1	\$20.00	\$175.00
Euonymus Coloratus		
2-yr.	20.00	175.00
Rooted Layers	5.00	35.00

SWEET CHERRY

August Supreme	Per 100
9/16-in. cal., 4 ft. up	\$100.00
7/16-in. cal., 3 to 4 ft.	75.00

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New Carlisle, Ohio

SPRING SURPLUS

	Each
150 Enkianthus Camp., 6 to 7 ft.	\$ 4.00
250 Azalea Kaempferi, 2 to 3 ft.	2.25
250 Azalea Kaempferi, 3 to 4 ft.	3.00
25 Ginkgo, 8 to 9 ft.	2.50
20 Black Walnut, 10 to 12 ft.	3.00
20 Butternut, 10 to 12 ft.	3.00
100 Red Oak, 12 to 14 ft.	3.25

50 at 100 rate.

BRIMFIELD GARDENS NURSERY
245 Brimfield Rd., Wethersfield, Conn.

BLUEBERRY PLANTS

3 to 6 ins., 6 to 12 ins., 12 to 18 ins.
Well branched 2-yr. stock.
Cabot - Jersey - Rubel - Pioneer
BOUNTIFUL RIDGE NURSERIES
Princess Anne, Md.

Grapevines, Currant Roots,
Currant Cuttings and Berry Plants.
Small Fruit Specialists.

WEST HILL NURSERIES
Fredonia, N. Y. Since 1875

TRUE DWARF BOXWOOD

Buxus Suffruticosa	Per 100
12 to 16 ins., B&B	\$11.00
16 to 18 ins., B&B	22.00

EASTERN SHORE NURSERIES, INC.
Easton, Md.

New Books and Bulletins

"GROUNDS FOR LIVING."

Prepared as a guide to the home dweller in the planting and care of his grounds and gardens, "Grounds for Living" is a volume full of practical information that may find a place on the reference shelf of the nurseryman. Just published by the Rutgers University Press, at \$2.50, it was edited and written by members of the staff of the New Jersey college. Contributors of the chapters are: Home setting, Charles H. Connors; lawn, Gilbert H. Ahlgren; shade trees, Pascal P. Pirone; flowers and plants, Henry M. Bickart; hobby flower crops, O. Wesley Davidson; vegetables, Richard B. Farnham; fruits, J. Harold Clark; soil, Firman E. Bear; outdoor construction, Wabun C. Krueger.

These names will be recognized for their previous contributions to horticultural lore and their guidance as of the best. The text of 334 pages is supplemented by more than 150 illustrations.

The book is a guide to the homeowner who is primarily interested in planning his grounds so as to derive the most pleasure and benefit from the plantings. To that extent the book is practical in its counsel and suggestions. While some planting lists appear, the book is by no means a detailed manual for the suburbanite. It is a competent work for the adult gardener, written out of the knowledge of the contributing authors, to meet the needs of the current period.

AMERICAN ROSE ANNUAL.

The 1946 American Rose Annual is the thirty-first yearbook of the American Rose Society, edited by R. C. Allen, secretary-editor, a worthy successor to J. Horace McFarland in the performance of this task. The 250-page book is amply illustrated, with about one-half of the illustrations in color.

Most of the fifty-odd articles are contributed by amateur rosarians from various parts of the country, a few from other countries. Other articles are contributed by commercial rose growers and by staff members of some of the agricultural colleges.

The topics include the many phases of growing garden roses. Some articles deal with special cultural and varietal suggestions for trying regions.

One of the most important sections of the book for those who take their roses seriously is that called "Proof of the Pudding." This regu-

lar feature comprises brief reports on the performances of new varieties in members' gardens. The information is summarized and grouped in such a way that it is possible to get a good picture of how a new rose is performing in almost any section of the country. About 150 members have contributed to this department.

The American Rose Annual is published by the American Rose Society, Harrisburg, Pa., and is sent to all members of the society. Non-members may purchase the annual for \$3.50. Membership is open to amateur and commercial rose growers.

SHADE TREE PROCEEDINGS.

While no meeting of the National Shade Tree Conference was held in 1945, the usual volume of proceedings has been issued, just appearing from the press. Invitational papers and reports of national officers and committees make up about one-third of the book of 184 pages, while similar space is occupied by the proceedings of the twelfth Western Shade Tree Conference and of the sixth Southern Shade Tree Conference.

The volume is filled with informa-

tion helpful to the arborist, from scientific workers and from practicing tree men. It is full value in itself for the membership fee of the National Shade Tree Conference. The capable editor of the volume is Dr. Paul E. Tilford, Wooster, O.

TELEPHONE TECHNIQUE.

In doing business by telephone, be it placing orders or securing service, the customer too often meets with surly indifference. Lack of courtesy seems to be the rule rather than the exception in these days of prosperity.

A booklet, "How Can We Do It Better?" recently issued by Railway Express Agency, Inc., is filled with ideas on how better to serve the public. Included are some worthwhile pointers for a good telephone technique.

Answer the phone promptly; this saves the customer's time. Make an immediate note of the name and use it in the conversation. Speak directly into the phone and enunciate distinctly in a clear and moderate voice. Listen attentively and do not ask the customer to repeat unless absolutely necessary. Have the necessary records within easy reach. If an inquiry is received and the information is not readily available, obtain the information and call back.

CONTRACT GROWING

We are still able to accept **Grow Contracts**, on **Peach, Apple, Pear and Plum**, in any quantity from **1000 to 100,000**.

We are in a position to give your account the proper attention. If you are interested, please write for details.

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NORWAY MAPLE

SOFT MAPLE

SWEET GUM

THURLOW WILLOW

WELL GROWN EVER-
GREENS, in variety.

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List.

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CALLICOON NEW YORK

NOVELTY PERENNIAL and ROCK GARDEN PLANTS

Wholesale Trade List now ready.
Send for your copy.

CARROLL GARDENS Westminster, Md.

Nursery Stock at
Wholesale Only.

ARTHUR DUMMETT

Bernardsville, N. J.



COVER ILLUSTRATION.

Abies Homolepis.

Abies homolepis, the Nikko fir, is a native of Japan and was introduced around 1861. It is a large, distinctly pyramidal tree, said to reach a height of 100 feet in its native habitat. Specimens in this country seldom reach a height exceeding fifty to sixty feet. This tree exhibits a broad base, and the spreading up-turned branches form a distinct pyramidal top. The glossy dark green leaves spread outward and upward, forming a characteristic V-shaped depression over the twigs. The branchlets are grooved, furnishing a character that can be used for identification purposes. Additional identification points are in oval resinous buds and smooth gray twigs.

As with most of the firs, the Nikko fir is relatively slow-growing and requires a cool climate for most satisfactory growth. Because of this fact, most of the firs do better in the east and at the higher altitude than they do in the midwest. This point seems to be particularly true of the Nikko fir. It has not done too well in the middle west, but is usually reported as one of the best of the firs in the eastern states. It is not adapted to planting in congested areas nor will it stand crowding. Under such conditions, it drops its lower branches, the growth is poor and the foliage loses much of its attractiveness.

Propagation is usually by seeds which may be sown in the fall or held over winter at a cool temperature and sown the following spring.

The Nikko fir will find rather extensive use for a medium-size evergreen tree in the northeastern states and the north central states. In the hotter and dryer portions of the central states, away from the lake areas, it will not be so satisfactory.

L. C. C.

[Photograph from New York Botanical Garden.]

BEN L. BORY has sold the Mount Vernon Nursery, San Bernardino, Cal., and has purchased Brock's Garden Supply, at Colton.

THE Homedale Nursery & Landscape Co., Minneapolis, Minn., has been started by Russell H. Zakariasen, recently discharged naval gunnery officer. He was formerly associated with the Lynnhurst Nursery, Minneapolis. An office building has already been erected on the 16-acre plot on highway No. 7 east of Hopkins.



Growers of a complete
line of deciduous and
coniferous species.

JEWELL NURSERIES, INC.
Lake City, Minn.

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general assortment for
the best Landscape Plantings

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PRINCETON ILLINOIS

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FOREST AND SHADE TREES
VINES AND CREEPERS

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GENERAL LINE
OF NURSERY STOCK

THE GOLD CHESTNUT NURSERY

Chestnut Tree Headquarters

Cowen, W. Va.

LINERS • TREES

Wholesale Prices to the Trade Only.

Letters from Readers

REJECT FOR NEMATODE.

The object of this letter is to save eastern nurserymen a lot of needless expense and the California nurserymen considerable disappointment. We are referring to the matter of shipping plants which are infested with root nematode. Such plants will positively be rejected by any county commissioner in the area generally known as northern California. This may be a slightly misleading term, as it includes more than three-quarters of the state. The coast range and the Sierra Nevada mountains come together about twenty-five or thirty miles south of Bakersfield, and there are called the Tehachapi mountains. It is generally understood in California that everything south of the Tehachapi is southern California and north of it is northern California. We cannot guarantee that no rejections would occur in southern California, but the northern part is comparatively free from this pest and agricultural authorities are determined to keep it out as far as possible. It is so easily recognized by any competent inspector that there is absolutely no excuse for shipping such plants to this area.

Walter B. Clarke.

ATTENTION, SECRETARIES!

It grieves me a lot each month's end when we receive our monthly bank statement and find missing therein checks given to the many nursery associations of which we are members. It seems as though association business is a secondary matter with the secretaries of most local and state organizations (all of whom operate their own nursery business properly).

They usually hold dues checks until a large number accumulates and then deposit them all at one time. It should be easy to carry small cash envelopes along to the bank when making a regular business deposit and cash the dues checks, putting the money in the marked envelopes and holding it until some Saturday or Sunday night to credit the membership dues in the association books. But it is never done.

It becomes irritating when such checks remain out for two or three months sometimes and entries of them have to be repeated at the closing of each month's books, when they could so easily be handled according to the above suggestion and save the ill feeling which is engen-

dered when the association dues checks do not show up in the bank statement.

The American Association of Nurserymen's office is certainly not included in this complaint.

George F. Verhalen.

TREE EXPERTS FIRM HOLDS STAFF CONFERENCE.

The Cedarvale Tree Experts, Toronto, Can., called together their entire staff for the first in an annual series of conferences, for the purpose of discussion of problems and practices, March 11 and 12. During the years of the war it became most difficult to maintain an educational program comparable to that which was formerly in effect, and while every conceivable method was contrived to provide the best in workmanship, it became apparent that there was a need for standardization of practice, as well as a consideration of the most modern ideas in the field of the tree surgeon.

This conference, therefore, provided the starting point in a new and more vigorous educational program and an opportunity to contact a widely separated staff as one group. Because it is difficult always to make personal contact with men operating at considerable distances from the head office, this conference further made it possible to acquaint the staff

with the various problems which arise from time to time and to establish a program whereby the men could be visited at regular intervals, at a time when it would be most convenient and of greatest value to them.

The program was handled almost entirely by members of the staff and covered a wide variety of subjects, well illustrated by a large number of exhibits. The success was measured by the profusion of favorable comments from the staff and by their devoted interest to the subjects under discussion. After an evening meeting, March 10, of foremen and representatives for discussion of problems, two sessions were held on each of the following days, at which were presented talks on various phases of tree work.

A successful conclusion was written to the conference when the management entertained the staff and friends at a banquet, under the genial chairmanship of the general manager, F. E. Martin.

THE Edwardsville Rotary Club met recently at the greenhouses of Ernest Tosovsky's Home Nursery, St. Louis road, Edwardsville. Dr. C. T. Gregory spoke on DDT and the care of lawns.

Boyd
NURSERY COMPANY

McMinnville, Tenn.

ORNAMENTAL SHRUBS
SHADE TREES, VINES
FOREST TREE SEEDLINGS
LINING-OUT STOCK

5000 JUNIPERS, B&B

F.O.B. trucks at nursery.

Pfitzeriana, 2 to 3 ft. and 3 to 4 ft.
Hibernica, 3 to 4 ft. and 4 to 5 ft.
Ashford, 2 to 3 ft.
Andorra, 1 1/2 ft.
Hill's Golden Pfitzer, 2 to 3 ft.

One block of 2000 assorted evergreens at Ashford, N. C. A-1 condition; half in B&B sizes. Close to quick transportation, freight or highway.

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For Peach and Apple.**

We specialize in the propagation of the Peach and Apple. We own the exclusive budding rights of the famous Hale Gold Peach. You will like it. Write us for certified statements as to its great merits. We also grow the Dixie Red and Dixie Gem. Grow Contracts before budding time enable us to make the price much cheaper; besides, you can be sure of getting what you want.

S. M. Phillips Nursery Co.
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**The CHRYSANTHEMUM
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WONDERLAND NURSERIES
Ellerson, Va.

BOOKS

"HARDY CHRYSANTHEMUMS," by Alex Cumming, \$2.50 per copy postpaid.
"GARDEN & GREENHOUSE CHRYSANTHEMUMS," by Alex Laurie, \$2.00 per copy postpaid.
WONDERLAND NURSERIES, Ellerson, Va.

GREEN ASH

Per 100
6 to 8 ft. \$ 55.00
8 to 10 ft. 65.00

Packing at cost.

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WRITE US ABOUT—

- Evergreen Liners
- Shade Trees
- Specimen Evergreens
- Flowering Shrubs
- General Assortment of Stock.

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Juniperus Scopulorum Parki
Something new.

A spreading scopulorum of the pfitzeriana type. All rights released. Not over 100 to a customer.

Price, 75c each.

No other grafts available this spring.

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Wholesale growers of the best
Ornamental Evergreens,
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Shrubs and Roses.

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OUR new Wholesale List is ready for mailing. The first in two years. Don't miss the new patented Barberry and other novelties.

BURTON'S HILL TOP NURSERIES
Cassstown, Ohio

OKLAHOMA CITY MEETING.

The Oklahoma City Retail Nurserymen's Association was invited to hold its meeting last month at the home of Mr. and Mrs. Fred L. Garland, on their special invitation for the purpose of introducing the bride of Lee Garland, who had just come with the groom from her former home, in Colorado. About two dozen attended. The ladies were entertained at bridge while a short business session was held.

The proposal of pooling purchases through an association manager was discussed. The manager would also be the agent of the members for the disposal of surpluses. The committee formulating plans was instructed to report at the next meeting.

Discussion of landscaping of FHA houses brought forth the opinion that the cheap prices obtained by most nurserymen were due to poor salesmanship. N. D. Woods thought that cooperative effort by the nurserymen might obtain a larger government allowance for landscaping on these small homes.

The association endorsed the amendment to the plant quarantine law recently introduced in Congress by Senator Elmer Thomas.

FLORIDA MEETING.

Florida nurserymen will meet for a round-table discussion of soil and growing problems in connection with the annual meeting of the Florida State Florists' Association, at Tampa, May 19 to 21. Jack O. Holmes is cochairman for the convention, with Harold B. Tinman. The first meeting of the association since 1942, this will celebrate the twenty-fifth anniversary of its founding.

BOOKLETS FOR CUSTOMERS.

Another of the nurseries to come to the aid of its customers with helpful and easily understood information on gardening techniques is the Marshall Nurseries, of Arlington and Omaha, Neb., and Denver, Colo. The firm has issued two booklets, "Care and Culture," which gives instructions on cultivation, watering, pruning and spraying specifically for the trees and plants of the plains regions, and "How to Plant," which gives all the necessary details for the successful planting of ornamental and fruit trees, evergreens, roses, shrubs, small fruits and perennials. Charts, diagrams and sketches further clarify the text, so that even the first-season gardener can follow the instructions with ease.

ESTIMATING CHARTS

THIRD EDITION

READY APRIL 15, 1946

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The Most Useful
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NURSERYMEN**LANDSCAPE CONTRACTORS****LANDSCAPE ARCHITECTS**

A BOON TO ESTIMATORS

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RIDGEFIELD, CONN.

HARDY CHRYSANTHEMUMS

Field-grown, rooted divisions	Per 100
Autumn Lights, single, reddish-bronze	6.00
Caliph, double, oxblood-red	6.00
Country Girl, single, pink	6.00
Evelyn, double, reddish-bronze	6.00
Goblin, Pompon, bronze	5.00
Jean Treadway, double, pink, dark pink center	6.00
Judith Anderson, Button, yellow	6.00
Pygmy Gold, short yellow Pompon	6.00
White Gull, short, white Button	6.00
Pink Cushion	3.75
Bronze Cushion	3.75
Red Cushion	3.75
White Cushion	3.75
Yellow Cushion	5.00
25 at the 100 rate minimum order \$2.00, 10% discount on 1000 of one variety.	

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PFITZERS**An outstanding planting of Finished Trees.**

24 to 30 to 36 ins.

Also smaller sizes.

Beautiful stock B&B

Shipment in moss, if preferred, individually wrapped or bulked.

Also Tamariscifolia, various Pines, Concolor Fir, Colorado Blue Spruce, Colorado's Silver Cedar, etc.

HIGH VALLEY FARM

Colorado Springs, Colo.

WANTED

300 Spreading Yews, 15 to 18 ins.
300 Spreading Yews, 18 to 24 ins.
100 Spreading Yews, 2 to 2 1/2 ft.
100 Upright Yews, 18 to 24 ins.
100 Hicks Yews, 18 to 24 ins.
Please send catalog and surplus list on other stock.

G. E. HEIDEMANN NURSERY
Addison, Ill.

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SMALL FRUIT PLANTS

Grapes, Currants and Raspberries—our specialty.

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**EVERGREENS**

Growers of Quality Evergreens
Lining-out Stock a Specialty
Write for Trade List

EVERGREEN NURSERY CO.
Established 1884 : STURGEON BAY, WIS.

California Meetings

RECORD ATTENDANCE AT LOS ANGELES MEETING.

Members of the Los Angeles chapter of the California Association of Nurserymen established a new record for attendance at the meeting of March 27, with 119 members and guests present.

Highlights of the meeting were an elaborate display of camellias consisting of several hundred blooms, a skit presented by two members, and the opening of the drive to enroll members in the association's compensation insurance plan.

The camellias, which were exhibited and later distributed among the ladies present, were brought to the meeting by A. Carter, of Paul J. Howard's Horticultural Establishment; Mr. and Mrs. Marshall, of the Marshall Camellia Gardens; E. H. Carter, of Carter's Camellia Gardens; E. B. Arnesen, of the Valley Garden Supply Co.; H. Swayne and John A. Armstrong, of the Armstrong Nurseries; Howard Asper, of Rancho Del Descanso, and Pete Mordigan, of the Mordigan Evergreen Nurseries. A detailed and informative discussion of the history, varieties, propagation and cultivation of camellias was given by Will Woodruff, of the Valley Garden Supply Co.

G. Norden Hanover and Miss Holylaugh, of the Hanover Nurseries, presented a two-act skit burlesquing the trials and tribulations of a nurseryman in the daily course of dealing with female shoppers. This innovation was well received, and it is planned in the future to call upon other members to present home talent skits of a similar nature.

Paul Moulder, president of the state association, gave the membership a report on the semiannual meeting of the board of directors, held at Santa Barbara March 11 to 13 and reported in the preceding issue of the American Nurseryman.

Howard Gill, of the State Compensation Insurance Fund, outlined the methods by which members of the association may participate in the group compensation insurance plan. California nurserymen have been signing up in large numbers, and it is expected that within the next six months the majority of them will be in the group.

The executive secretary of the state association, Jack Lincke, outlined the procedure being followed in conducting a state-wide survey of wages in

the nursery industry. Upon receipt of the 2,000 forms sent out, the wage data will be reduced to a common denominator, and it is expected that committees of nurserymen in the state's seven wage areas will among themselves set up standard rates for given nursery occupations. A spot survey conducted in Los Angeles county has indicated the need for this project.

The meeting was presided over by the chapter president, Stewart Henson, who introduced Mrs. Esther McConnell, the new chapter secretary. In order to handle chapter affairs more efficiently through relieving the elected secretary of the burdensome details of correspondence, minute keeping and other chapter details, it was decided by the Los Angeles group to employ a qualified stenographer. It is believed that all chapters in the state will do likewise.

The new chapter secretary reported to the meeting that since June, 1945, the total membership of the Los Angeles group had increased six-fold.

Mrs. Esther McConnell, Sec'y.

KEPLINGER'S ORIGINAL STRAIN

Gem Everbearing Strawberry Plants

13 years of scientific improvement of original strain, outyielding all others 3 to 1, spring and fall.

The world's best GEM stock plants Per 1000 \$25.00

America's finest GEMZATA plants 35.00

All plants F.O.B. here; Red Stele disease-free.

HEART-O-MICHIGAN FARMS & NURSERIES

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Mention The American Nurseryman when you write.

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FRUIT TREE STOCKS

Apple, Pear, Plum and Cherry

Also Rose Seedlings for budding.

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SEEDS

Collectors of Tree, Shrub and Wild Flower Seeds

Crude Drugs and Ornamentals

E. C. MORAN Stanford, Mont.

CENTRAL CHAPTER HEARS GROUP INSURANCE PLAN.

For the first time in over three years, the Central California Nurserymen's Association held a meeting on the peninsula side of the bay. The meeting was held at the Milbrae Country Club, at Millbrae, and seventy-five members and guests were present. This is the largest attendance any meeting has ever had. The location is ideal for such a meeting, and it was decided to hold the June meeting there.

The main item of business was a thorough discussion of group insurance for the members. At this time only employees' or workingmen's compensation insurance was taken up. Jack Lincke, executive secretary of the state association, had come from the main office at Los Angeles, as he had fathered the plan, and he told of its benefits. Some further details were furnished by R. L. Schworn,

AGAIN AVAILABLE PROPAGATION OF PLANTS

By

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Comprehensive and Up to Date

A complete practical guide for the grower to the working methods of plant propagation by seeds, layers, grafting and budding.

Tells the how and why of all processes.

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This is our last ad this Spring!

2000 Kieffer, 3000 Bartlett, 1500 Garber Pear Grafts, Apple Grafts, 3000 each: Red Delicious, Jonathan; 1500 Yellow Delicious, Rome Beauty, Grimes Golden, Wealthy; 1200 Stayman.

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RED LAKE CURRANTS
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FARIBAULT, MINN.**WE CAN SUPPLY**

Agawam, Brighton, Catawba, Concord, Fredonia, Lucile, Moore's Early, Niagara and Worden Grapes in 2-yr., No. 1, and 2-yr., No. 2.
Latham Red Raspberries.
Plum and Prune, northern-grown on Myroholan, 1-yr., 18 to 24 ins., 2 to 3 ft., 3 to 4 ft., 4 to 5 ft.
Bartlett Pear, 1-yr., 7/16-in.
Sweet Cherry, 1-yr., 18 to 24 ins., 2 to 3 ft., 5/16-in., 7/16 and 9/16-in.
Apricots, 5/16-in.
Apple, 1-yr., 7/16 and 9/16-in.

CHAMPION NURSERIES

Perry, Ohio

SMALL FRUIT PLANTS

Still available: Black Raspberry tips, St. Regis Raspberries, Blackberries, Boysenberries, Rhubarb, Asparagus, 1-yr. Niagara Grapes, large quantities of Strawberries in spring and fall varieties. Write for quotations.

Also offering good supply of Adams and fair amount of Rubel and Rancocas Blueberries, 1-yr. rooted cuttings, 35c ea.; \$30.00 per 100; \$250.00 per 1000. Rubel 2-yr. plants, 65c ea.; \$60.00 per 100; \$580.00 per 1000.

L. J. RAMBO'S WHOLESALE NURSERIES
Bridgman, Mich.**We wish to purchase...**

Evergreens, Fruit Trees,
Shrubs, etc.

Send your surplus list to

THE PONTIAC NURSERY CO., Romeo, Mich.**BULK & CO., Nurserymen,
of BOSKOOP, HOLLAND**

Experienced Exporters of Nursery
Stock since 1914.
ASK FOR CATALOG

who represented the California state insurance commission, which handles workingmen's compensation insurance for individuals or groups who do not carry protection in a private insurance company.

Mr. Lincke said a survey had shown, first, that many nurserymen carried no workingmen's compensation insurance, in spite of the fact that the state law required such insurance be carried and that every employer of even one man was liable to a \$5,000 fine if his helper were injured and the employer carried no insurance. In addition, such an injured employee could, and no doubt would, further sue in a civil court for such injuries and, carrying no insurance, the nurseryman was beaten at the start and might lose everything he had in a judgment to the employee.

The advantage of group insurance through the state association is the cash savings to the members of the group, compared with individual policies carried either with the state or private companies. Mr. Lincke told the members that the savings would more than pay their dues in the nurserymen's association. He said forty-six members were already paying the state insurance, so that there were enough nurserymen to insure a group policy. The others were advised to permit their current policies in private companies to run out and then to take up the insurance with the state. Most of the members signed up to do as recommended. The rate with the state for nurserymen is \$1 per hundred dollars of pay roll, while for office help it is 7 cents and for traveling salesmen it is 47 cents. The dividends on the policy can run up to eighty per cent of the premium paid, but the best experience to date is about sixty per cent, and as a rule it will run from twenty-five to sixty per cent.

New members and guests present at the meeting included T. R. O'Connor, White Oaks Nursery, San Carlos; T. L. Pennington, San Carlos; B. L. Sherwood, Menlo Park Nursery, Menlo Park; Jack F. Schneider, Orchard & Nursery Supply Co., Lafayette; H. W. Kerrigan, Kerrigan Nursery, Oakland; Paul Van Kempf, Pacific Nursery, Colma; Joe H. Macho, Lomita Park Nursery, Lomita Park; Wayne Sherwood, Menlo Park Nursery; Menlo Park; George P. Doig, Home Garden, Palo Alto; Wray Hiltabrand, state department of agriculture, Sacramento; A. P. Messenger; Max Leonard, San Mateo county agricultural commissioner; M. H. Chamberlain, Hillside Nurs-

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Hardy, Northern-grown

1-Year Plants

100.....	\$ 6.00
250.....	12.00
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Send today for List of Trees available.

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SMALL FRUITS****HARRISON BROTHERS NURSERIES**

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1-yr. and 2-yr.

The very best roots we have ever grown. All state inspected. Can furnish in quantity lots. Write for prices.

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Paw Paw, Mich.

ASPARAGUS

Mary Washington

1 and 2-yr. plants.

Let us quote on your needs.

BOUNTIFUL RIDGE NURSERIES
Princess Anne, Md.

ery, South San Francisco; Elmer Merz and Charles Armstrong, Sacramento.

The next meeting will be at Niles May 9. W. B. B.

TRI-COUNTY GROUP MEETS.

The forty-sixth meeting of the Tri-County chapter of the California Association of Nurserymen was held at the Hotel Lobero, Santa Barbara, March 22.

After dinner President Walter Knecht called for the presentation of the guests. They were Mr. and Mrs. Hall, Ventura; Mr. and Mrs. Murphy, Camarillo; Harold Lewis, Camarillo, and Cliff Melton, Ventura.

Bert Kallman, who represented the Tri-County chapter at the state association's board of directors' meeting at Santa Barbara, presented the minutes of both sessions, held March 11 and 12. Mr. Kallman indicated that he was impressed with the able manner in which Jack Lincke had conducted the office of executive secretary and that there had been some real accomplishments since Mr. Lincke had begun his organizational program.

The question of hiring a secretary for the Tri-County chapter was discussed briefly. Clarence Mets' proposal that the present secretary be instructed to prepare a report to the executive committee regarding a plan to hire an assistant to carry out the routine duties that have been outlined by the board of directors and accepted by the Tri-County chapter was unanimously approved.

Mr. Mets and Mr. Kallman, membership chairmen for Ventura and Santa Barbara counties respectively, called for a new drive for increased participation of all nurserymen of these counties in the California Association of Nurserymen.

The speaker of the evening was T. J. Parker, of Los Angeles, whose topic was "Soils and Soil Chemistry." Mr. Parker's informal talk was highlighted by rather novel ideas regarding liquid fertilizer application to foliage, and a lively discussion ensued.

Twenty-six members and guests were present.

Karl Walter Opitz, Sec'y.

CALIFORNIA ASSOCIATION SEEKS CENSUS DATA.

Preliminary talks have been had with H. J. Ryan, Los Angeles county agricultural commissioner, by Jack Lincke, executive secretary of the California Association of Nurserymen, with respect to compiling an annual census of nursery production



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EXCELLENT—Firm shipping berry; rich, radiant red color; full strawberry flavor; good canner and freezer; heavy bearer; excellent aroma; sturdy plant with luxurious green foliage.

Plants are available in four colors or in black and white of the new Streamliner strawberry for use in your catalogs.



in the state. At the present time, California does not have such figures. Data are collected on citrus and nut trees and some other products by the bureau of nursery service, and the county agricultural commissioners collect other data on some of the material produced. However, at present, there is no over-all industry-wide compilation of the state's total output of all nursery material.

By coordinating the work of the bureau of nursery service, the county agricultural commissioners and the state association office, it is believed that a worth-while summary can be produced each year that will be of great value to the industry.

In time the association will have a backlog of figures that will serve many purposes. Chief among these will be the avoidance of overproduction and a gauge of the state's capacity to absorb nursery products.

Subsequent talks on the subject were arranged with A. A. Brock, state director of agriculture, and J. Lee Hewitt, supervisor of nursery service.

CALIFORNIA NOTES.

M. H. Chamberlain, who has operated under the name of the Chamberlain Nurseries, at South San Francisco, has changed the name of

Items to offer for 1946 Delivery

BERRIES, general list
PEACH TREES
FIG TREES
GRAPES, complete assortment
WHITE BIRCH, 8 to 10 and 10 to 12 ft.
DOGWOOD, Florida white
DOGWOOD, Pink-flowering
NORWAY MAPLE, 8 to 10 and 10 to 12 ft.
HORSE CHESTNUT, Red
GINKGO BILOBA
OAKS, Red Scarlet and Pink
DECIDUOUS SHRUBS in variety
CLIMBING and RAMBLER
ROSES in variety

RICH & SONS NURSERY
Rt. 4, Hillsboro, Ore.

RARE BULBS and PLANTS

Agapanthus, dwarf
Alstroemeria, in variety. (Including beautiful blue A. violacea)
Blechnum, hardy white and lavender
Orchid
Calla maculata alba
Chlidanthus
Haemanthus robustus
Haemanthus Katherine, small supply
Ixia Bloem Erf
Leucocoryne (Glory-of-the-Sun)
Moraea, in variety
Nerine, in variety
Schizostylis, red and pink varieties
Watsonia Dazzler

VELTHEIMIA VIRIDIFOLIA

Big heady of rose-red, tubular flowers on 2-foot stem. Bold habit and beautiful bright green, shiny leaves with wavy edges. Especially good as pot plant for Christmas and Easter trade. \$30.00 per 100.

All the above, native to South Africa, South America or Asia, are grown by us and do well in this climate. Many are also hardy.

Delivery fall and winter.

WHOLESALE ONLY

Ask for dealer's descriptive catalog and price list.

LAS POSITAS NURSERY

P. O. Box 750
Santa Barbara, Cal.

his nursery to the Hillside Nursery. He grows only flower plants in flats for the wholesale trade and has four full-time and several dozen part-time men and women working for him.

John Willard Lawrence, of Hayward, has been appointed instructor of floriculture at the San Francisco Junior College, Bert Plath, a director of the Central California Nurserymen's Association, was one of the members of the board aiding in this selection.

The San Fernando Nurserymen's Association is planning a flower show in the near future. With the Kiwanis Club, it is also aiding actively in a postwar garden program contest. Speakers at the last meeting of the group were Evan Hughes, of the Blue Cross Insurance Co., and James H.

Pitts and Howard Gill, of the California State Compensation Insurance Fund.

The California college of agriculture, from its Berkeley offices, announces that Dr. C. B. Hutchinson, for fifteen years dean of the college, has been appointed vice-president as of April 1.

Members of the state department of agriculture at a recent meeting of the Central California Nurserymen's Association announced progress is being made on the pinto tag organization which may include up to thirteen of the northern counties. It was positively announced that it would be a long time before the entire state could be included in such a program because of the great differences in plant materials and plant insect and disease problems in the northern and the southern parts of the state.

Representatives of the wholesale fruit tree producers of the state met at Modesto April 11. Considerable out-of-meeting conversation dealt with the prices of fruit trees in 1947. It was pretty well agreed that there would be no changes, either up or down, for at least another year. Supplies are on the short side, and the amount of trained labor in sight does not give much hope for overproduction of budded or grafted stock for several years. Demand is increasing slightly, particularly from homeowners.

W. B. B.

CALIFORNIA STATE FAIR.

Approving premiums totaling more than \$30,000, directors of the California state fair last month set a flower exhibit standard unprecedented in state fair history.

W. S. Hillis, of Madera, is chairman of the floriculture committee.

The 1946 flower exhibit at the state fair, August 29 to September 9, is expected to be the greatest display of such nature ever presented in one setting in California. The famed Hall of Flowers was moved to Sacramento from Treasure island and will house special displays, some flown from Pacific areas and South America, according to Ken Fry, exhibit supervisor.

GEORGE READER and his son-in-law, Charles E. Bean, have opened the Inter-Valley Nursery, 3800 Foot-hill boulevard, La Crescenta, Cal. Mr. Bean has been in the business all of his life, with four years in the navy.

PORTLAND WHOLESALE NURSERY CO.

306 S. E. 12th AVENUE Avery H. Steinmetz PORTLAND, OREGON

Quality Stock

We expect to publish a new catalog May 15. It will contain prices for the season 1946-47.

Our 1945-46 shipping season is now over, and we wish to thank our customers for their patronage.

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EVERGREENS
SHADE AND FLOWERING TREES
FRUIT TREE SEEDLINGS
FRUIT TREES
DECIDUOUS SHRUBS
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Fruit Tree Seedlings
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Grown right and packed right.
Combination carloads to Eastern
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*Wholesale Rose Growers
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1000 Specimen Dwarf Boxwood, 18 to 24 ins.
500 Green Aucubas, 2 to 3 ft.
150 Dwarf Alberta Spruce, 2 to 3 1/2 ft.
50 Juniper Meyeri, 3 to 4 ft.
All stock with perfect fiber roots.

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Immediate shipment carload lots.

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CARAGANA Per 1000
2 to 3 ft. \$40.00
18 to 24 ins. 35.00
12 to 15 ins. 25.00
BLACK HILLS and COLORADO SPRUCE,
6 to 12 ins., \$17.50 per 100.
TREADWELL NURSERY CO.
Great Falls, Mont.

HARDY LINERS Per 100
Canada Hemlock, 6 to 9 ins., 2 tr. \$20.00
Canada Hemlock, 9 to 12 ins., 3 tr. 25.00
Zanthoxilla spicata, rooted layers. 5.00
CHAS. H. WILLIAMS NURSERIES
Box 223, Exeter, N. H.

LINING-OUT STOCK. Grafts, cuttings and seedlings of good quality. Some new and interesting introductions of Azaleas, Taxus, Tsuga, etc. Ask for our list. **JOHN VERMEULEN & SON**, Westbury, L. I., N. Y.

COLORADO BLUE SPRUCE
4-year seedlings, 4 to 7 ins.
\$4.50 per 100; \$40.00 per 1000.
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Littleton, Colorado

COLORADO BLUE SPRUCE. Good color.
5000 3 to 6 ft.
200 6 to 12 ft.
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FRUIT TREES

SIX ACRES OF PEACH SEEDLINGS
Will consider June budding varieties desired and grafted under contract. Write us your offer. **PACK TRUE-TO-NAME NURSERY CO.**, P. O. Box 467, McMinnville, Tenn.

GRASS SODS

We again solicit, after four years' absence, your **GRASS SODDING** contracts. No job too large or too small for us to handle.
ABBOTT'S GARDEN SERVICE
Box 208, Flushing, N. Y.

HARDY PLANTS

PERENNIAL SPECIALTIES

SHASTA DAISIES Per 100 Per 1000
Admiral Byrd, 2-in., potted. \$20.00 \$150.00
Beaute Nivelloise, 2½-in. 30.00 250.00
Diener's Fringed Giants, divs. 15.00 125.00
Elder Improved, rt. divs. 45.00
Favorite, strong rt. divs. 15.00 125.00
Favorite, potted in 2-in. pl. bds. 25.00 175.00
Esther Read, strong rt. divs. 15.00 125.00
Esther Read, potted in 2-in. 20.00 150.00
G. Marconi, in 2½-in. pots. 25.00
Mount Shasta, potted 2-in. 25.00 200.00
Shasta Double Supreme, divs. 15.00 125.00
Zinnia-flowered, rt. divs. 15.00 125.00

HARDY ASTERS

Per 100 Per 1000
Beechwood Charm, 2-in. pots. \$22.50
Blue Bird, field-grown clumps. 20.00
Blue Gown, field-grown clumps. 15.00
Mrs. F. W. Fitzpatrick, fl. cl. 15.00
Mt. Everest, field clumps. 22.50
Mt. Everest, 2-in. potted stock. 25.00 225.00
Mulberry, field clumps. 22.50
Pink Party, field clumps. 17.50
Queen Mary, field clumps. 22.50
Violetta, field clumps. 22.50
Violetta, 2-in. potted stock. 25.00 225.00
Ypres, field clumps. 17.50

HARDY CHRYSANTHEMUMS Per 10 Per 100
Apricot Glow apricot, 2½-in. \$6.00 \$40.00
Fire Glow, Oriental-red, 2½-in. 6.00 40.00
Magnolia, creamy-pink, 2½-in. 6.00 40.00
Pink Radiance, best pink, 2½-in. 6.00 40.00
Olive Longland, sal.-pink, 2½-in. 4.50 35.00
Harvest Moon, burnt-orange, 2½-in. 3.50 30.00
Meadow Gold, yellow, 2½-in. 3.50 30.00
Avalanche, white, field clumps. 3.50 25.00
Ruby Pompon, red, field clumps. 3.00
Send for our complete list.
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CHECK YOUR WANT LIST

Per 100
ACHILLEA Filipendulina (yellow) \$10.00
AQUILEGIA
Mrs. Scott Elliott, Crimson Star, long-spurred Blue, Snow Queen. 10.00
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Pacific Hybrids, 2 Tr. 18.00
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PLATYCODON, mixed shades. 8.00
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Strong 1-year, field-grown plants. All plants are subject to prior sale.
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Field-grown plants of genuine Holt's Mammoth Sage, \$15.00 per 100, F.O.B. the nursery. Cash with order. Address Wholesale Department, **BURGESS SEED & PLANT CO.**, Gainesburg, Mich.

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Sweet-scented blue, hardy, heavy bloomers; large plants, \$3.00 per 100, \$25.00 per 1000.
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University of New Hampshire varieties. Clean well rooted cuttings for immediate shipment.

Per doz. Per 100
Nashua, bronze \$2.50 \$15.00
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*W. D. Holley, dwarf yellow. 3.00 20.00
*To be finished in pots for sale about Oct. 10.
25 of one variety at 100 rate; minimum order \$5.00. Terms: Cash with order.
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ONE OF THE BEST NEW HARDY MUMS

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Large double apricot-toned salmon-pink flowers. Very free bloomer. Late September on. An excellent cut flower. Height 2 ft. Potted plants, \$3.00 per 10; \$25.00 per 100. Rooted cuttings, \$2.50 per dozen; \$18.00 per 100.
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Have you tried these English Chrysanthemums? We have been growing them for 6 years and have sold them all over the U. S. They have met with a big response. For those who would like to try them, we are making the following Special Offer: 10 each 10 varieties rooted cuttings, \$10.00.
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New, hardy Primrose; dependable here without special care; likes partial shade; mixed colors; dark rose to white.
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Per 100
Algonquin Field Clumps \$25.00
Divisions 4.00
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Per 100
White English Violets \$10.00
Marsh Marigolds 10.00
Phlox divisions, hardy, 5 mixed colors 5.00
WHITE MILLWOOD GARDENS
Pine City, Minn.

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Brilliant purple, slightly fragrant, hardy field-grown plants.
\$3.00 per 100, \$25.00 per 1000.
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SIBERIAN IRIS

Delicate bloom on tall stems, assorted hardy, large field-grown plants.
\$3.00 per 100, \$25.00 per 1000.
Cedar Brook Farm, R.F.D. 1, Romeo, Mich.

PERENNIALS—Strong, 1-year-old, field-grown plants. Per 100 Per 1000
Aquilegia Dobbies' Imp. Hybrids. \$3.00 \$25.00
Aquilegia Mrs. Scott Elliott. 3.00 25.00
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SWEET LEMON BALM

Large, nice plants, \$3.00 per 100; \$25.00 per 1000.
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Stout, pretty plants for potting, \$10.00 per 100; \$75.00 per 1000.
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1-year, \$2.00 per 100; \$12.00 per 1000.
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Write for prices on quantity.
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Cultivated variety, \$8.00 per 1000.
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ASPARAGUS—New Jersey-grown. New Jersey is the home of Asparagus. Mary Washington Asparagus roots 1-yr., \$12.00 per 1000; 2-yr., \$17.00 per 1000. Whole Rhubarb roots, \$5.00 per 100. Horse-radish roots, \$8.00 per 1000. Globe Artichoke roots.
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HERBS—Tarragon, Lavender, Purple Lavender, Sage, Mint, Thyme, Lemon Balm, Sweet Marjoram, \$16.00 per 100.
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FOLLOWING SEEDS TO OFFER
Chinese Elm, 1946 crop, 1 lb., \$2.00; 10 lbs., \$17.50.
Kentucky Coffee Tree \$0.40
Redbud 2.00
Privet, Sinsene, D.B. 1.50
Will be pleased to contract for 1946 crop.
RIGDON'S TREE SEEDS, Stillwater, Okla.

PEACH PITS, southern collected, high germination, \$3.00 per bu. Peach, Plum, Apricot, fall delivery: 1-ft., 20c; 2-ft., 30c; 3-ft., 40c; 4-ft., 60c; 5-ft., 70c; 6-ft., 80c. Cash with order.
RIVERDALE NURSERIES, Riverdale, Ga.

CHINESE ELM TREE SEEDS
Clean and dry.
\$1.50 per lb.
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AMERICA'S MOST LOVELY ORNAMENTAL TREES—Liquidambar, Styraciflua (Sweet Gum), Red Maple, Red Oak, Red Cedar, Black Gum, Magnolia Glauca, Pine, Flowering Crab Apple, American Elm and Snow Fringe Tree (Graybeard), No. 1, 2-yr., \$15.00 per 100; No. 1, 3-yr., \$20.00 per 100; quantities for sale.
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FLOWERING SWEET SHRUB (CALYCANTHUS FLORIDUS)
A large-leaved shrub with spicy, fragrant chocolate-colored flowers; 2 to 3 ft., \$15.00 per 100; 3 to 4 ft., \$20.00 per 100. Quality stock.
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200,000 BUXUS SUFFRUTICOSA
Most beautiful, true, old-fashioned, dwarf, heavy, round, compact, perfect shaped tops, carefully grown under our personal supervision; 8 years; 10 to 12-in. plants, \$50.00 per 100; 35c in lots of 1000 or more.
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DOGWOOD (Cornus Florida)
Large white, mammoth-flowered, good spread; 2 to 3 ft., \$10.00 per 100; 3 to 4 ft., \$15.00 per 100; 4 to 5 ft., \$25.00 per 100; 5 to 6 ft., \$30.00 per 100. Attractive price on 1000 lots or more.
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HALL'S HONEYSUCKLE
(Lonicera Halliana Japonica)
Strong No. 1, 2-year, field-grown, selected plants, \$4.00 per 100, \$30.00 per 1000; lighter plants, \$20.00 per 1000. Immediate shipment.
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Rhododendron ponticum understock for grafting in the Fall 1946. Booking now; ask prices.
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RED WHEELING HONEYSUCKLE
5000 No. 1, 3 to 4 ft.
\$30.00 per 100.
Prompt shipment.
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MISCELLANEOUS

LINERS—Fine stock. Per 100
1000 Kalmia Latifolia \$ 7.00
100 Star Magnolia 10.00
2000 Heather, dark red and Spring wood & Beals mixed 7.00
NYSTAT'S NURSERIES
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Large Lobloily Pine Cones
\$7.50 per 1000.
DIAMOND STATE EVERGREEN CO.
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America's most beautiful natural Sweet Gum balls, Pine cones, Cotton and China-Berry pods, \$2.00 per bu., any amount.
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Flats in Stock	
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12 x 20 x 3, K.D.	13c
12 x 20 x 4, K.D.	14c
13 x 18 x 3, K.D.	13c
13 x 20 x 3, K.D.	14c
13 x 20 x 4, K.D.	15c
14 x 20 x 3, K.D.	16c
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Any size Flats made.

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STAKES—Bamboo
Carefully Selected—Dyed Dark Green.

Uniform Pencil Thickness.	
No. G-31 2 ft. Bale of 2000.....	\$10.95
No. G-32 2 1/4 ft. Bale of 2000.....	13.90
No. G-33 3 ft. Bale of 2000.....	16.65
No. G-34 3 1/4 ft. Bale of 2000.....	19.45
No. G-35 4 ft. Bale of 2000.....	22.35
TONKIN STAKES—Bamboo	
Dyed Green—Medium Heavy.	
No. G-41 2 ft. Bale of 1000.....	\$ 9.55
No. G-42 3 1/4 ft. Bale of 500.....	7.75
No. G-43 4 ft. Bale of 500.....	8.70
No. G-44 5 ft. Bale of 500.....	11.95
No. G-45 6 ft. Bale of 500.....	13.75
No. G-46 7 ft. Bale of 500.....	7.70
We cannot break bales.	
Quantity discounts, 10 to 24 Bales, 5 per cent.	
25 Bales or more, 7 1/2 per cent.	
SCHUPP SUPPLY CO., Wilmette, Ill.	

KNOCK-DOWN FLATS.

Made from a good grade of Southern Yellow Pine, since Cypress is not available. Standard specifications, inside measurements.
16x12x2 1/4 \$11.25 per 100
16x14x3 1/4 14.25 per 100
20x14x2 1/4 14.00 per 100
20x14x3 1/4 16.25 per 100
22 1/2 x 15x2 1/4 15.75 per 100
22 1/2 x 15x3 1/4 18.00 per 100
All other sizes quoted on request. Prices F.O.B. Birmingham.
We are manufacturers, not jobbers. Freight to any point is a small item per Flat. Our Flats are the best. Why pay more? Our quality guaranteed. Prompt shipment, any quantity. Attach check to order.
HIGHTOWER BOX & TANK CO.
Birmingham, Ala.

PROFIT WITH PERF-O-RAIN.

Rain when you want it—low pressure—rectangular strip watered—No overlap—No sprinkler heads or other gadgets—Portable lightweight pipe—Long life. Write for free folder. W. R. AMES COMPANY OF FLORIDA, 3905 E. Broadway, Tampa 5, Florida, or W. R. AMES COMPANY, 160 Hooper St., San Francisco 7, Calif.

MAGIC ELECTRIC WELDER, 110-volt AC-DC; welds, brazes, solders, cuts all metals; easy to use; full directions. Complete with power units, flame and metallic arc attachments, carbons, fluxes, rods, mask. Only \$19.95. Used by the Navy. Guaranteed one year. Splendid for nursery and farm use.
MAGIC WELDER MFG. CO.
241NA Canal St., New York, N. Y.

STEEL TUBULAR STAKES

Place orders now to meet your early spring sales, together with your own nursery requirements. 1/4-in. coplister to prevent rusting, 2c per ft.; 1/2-in. plain, 3c per ft. 1/2-in. plain, 4c per ft.; less 20 per cent. Made up in any length. Samples mailed.
H. HOHENBERGER, Box 263F, Monroe, N.Y.

SOIL HEATING EQUIPMENT, designed by a grower and engineer, for commercial propagation. Cable soil thermostat and pilot lamp to heat 20 sq. ft., \$10.95; 40 sq. ft., \$13.35; 60 sq. ft., \$16.75; 80 sq. ft., \$19.15, and 150 sq. ft. \$25.30. F.O.B. Seattle, L. N. ROBERSON CO., 1539 E. 103rd St., Seattle 65, Wash.

RUBBER. Your Rubber requirements are important. Know where to get it when you want it. Belts, rubber bands, boots, coats, gloves, hose, spray bulbs, aprons, budding strips. Get our price sheet and catalog today.
BROADWAY RUBBER MFG. CO.
Louisville 2, Ky.

SOIL HEATING CABLE by "GRO-QUICK." Heavy duty cable now available, also thermo. Bottom heat can't be beat for rooting cuttings, for forcing. Get free instal. data. GRO-QUICK, 366 W. Huron St., Chicago 10, Ill.

SEED STORE FIXTURES
Bins, Cabinets

WALKERBILT
Penn Yan, N. Y.

CEDAR STAKES last a long time. Price per 100: 6-ft., \$15.00; 8-ft., \$13.00; 4-ft., \$11.00; 3-ft., \$9.00; 2-ft., \$7.00. Shipped F.O.B. on cash with order. J. MILLER POTTER NURSERY, East Springfield, N. Y.

GIBRALTAR Frost Covers pay for themselves. Economical, long-lasting. Ideal for windbreaks, 6 ft. wide; 50 ft., \$13.75; 100 ft., \$26.00; 150 ft., \$39.00. NEW AMSTERDAM IMPORT, 122 Chambers St., New York 7, N.Y.

PRINTING

Letterheads, billheads, statements, cards, envelopes, tags, blotters, folders, catalogs, samples. Send copy for estimate.

J. GARLAND HILL, Dept. A, Seaford, Del.
COTTONETTE Squares are best for balling. Saves time and twine. All sizes in stock. Write NEW AMSTERDAM IMPORT, 122 Chambers St., New York 7, N. Y.

WANTED

WANTED
Used Rototiller or Ariens-Tiller.
ALDO R. FAULANO
163 26th St.
Barberton, Ohio

SEASONAL VARIATION OF PEACH SEEDS.

No one knows better than nurserymen that peach seeds which are used to produce budding stock may vary greatly in germination from year to year. The quality of the seeds obtained from any given source may vary from one year to another. Some of the reasons for this variation are not generally known and receive explanation, by R. F. Carlson, of the state experiment station, in New York Nursery Notes.

The major causes for lack of uniformity are split pits, shriveled seeds, nonviable seeds and improper handling and storing. Split pits are quite common, but are more prevalent in some years than in others. A 225-pound sample of 1944 Lovell pits contained two per cent split pits, whereas a 225-pound sample of 1945 pits from the same source contained five per cent. When the pit is split the seed is lost during shipping and storage, and while the bulk and weight of the shipment remain approximately the same, there is a reduction in the percentage of germination.

Shriveled seeds do not germinate and thus reduce the stand in the nursery row. A pit may appear normal in every way, but when opened a shriveled seed is found. Both shriveled seed and split pit are undoubtedly due to unfavorable weather conditions during the development of the fruit. A comparison of the 1944 and 1945 crops of peach seeds from the same source showed considerable variation in the number of shriveled seeds. The 1944 sample contained four per cent shriveled seeds, whereas the 1945 sample contained thirty per cent. However, this is not serious if good germination of the remaining seventy per cent is obtained.

Further reduction of germination may occur because of the presence of nonviable seeds. These seeds cannot be distinguished from normal seeds unless actual germination tests are made.

Proper storing and handling of the pits are important. They should be stored in a dry place. Alternate wetting and drying may cause decay of the seeds.

Therefore, a germination test based on the number of pits would provide an approximate prediction of what kind of stand to expect in the nursery row from the seeds planted.

MAX QUILLEN, son of E. M. Quillen, president of the Waynesboro Nurseries, Waynesboro, Va., recently returned from Germany and has been discharged after three years' service with an antiaircraft unit. He plans to enter Ohio State University in September for continuing study in horticulture.

THOMAS H. FAULKNER, recently released from the army air corps, has opened the Mountain View Nursery, at Maryville, Tenn., primarily a retail nursery and landscape service. In addition to eleven acres at Maryville, Mr. Faulkner also owns a farm at McMinnville, which he expects to stock. Before entering service, Mr. Faulkner was associated with the Howell Nurseries, Knoxville, and the Jones Ornamental Nursery, Nashville, Tenn.

Beginning in the Nursery Business

By John J. Pinney

Complete series of articles reprinted from issues of The American Nurseryman from September 15, 1945, to April 1, 1946.

IN BOOKLET FORM

Order at once, particularly if you wish quantity lots.

Single copy, 50 cents

5 copies, \$2.00 25 copies, \$6.00
15 copies, 4.00 50 copies, 10.00

AMERICAN NURSERYMAN

343 S. Dearborn St., Chicago 4, Ill.

NOTES FROM A NURSERYMAN'S WIFE

Have you heard of the rose plant so large that 150 people can dine in its shade, and of the Chinese wistaria that spreads over an acre of ground?

The rose, a white Lady Banksia, has outlived the bad men who made Tombstone, Ariz., famous. The slip from which this rose grew traveled from Scotland to Arizona, where Scotch Mrs. Gee gave it to her friend Mrs. Adamson, who planted it in her garden in 1882. It grows where it was first planted, in what is now the patio of the Rose Tree Inn, where it spreads over an arbor, 40x50 feet, and sends out hundreds of thousands of fragrant white blooms around Easter time.

The wistaria vine, at Sierra Madre, Cal., almost as old as the rose tree, is honored by an annual fete in March or April as the largest and most beautiful wistaria in the world. It, unlike the rose, which just grew, is a pampered beauty. Cold mountain water, forced by hydraulic pressure into some 200 holes five or six feet deep, provides the coolness necessary for dormancy. This wistaria is given not only tons of manure and commercial fertilizers, but gargantuan doses of vitamins; 3,000 earthworms were provided to aerate the soil, and a monthly soil analysis shows just what is needed to keep the vine in top form. It ought to live forever!

* * * * *

Animals are generally immune to poison ivy. Some species eat it freely.

"It is only 100 days from New Year's day to the bluebird."—Old Farmer, 1876.

"Reproductions of color in print come closest to perfection in seed catalogs." Food pages come a close second, we'd say.

* * * * *

New things under the horticultural sun:

The Du Pont Co. has developed in its chemical and agricultural research department a way of treating hardwoods, gums and oaks with a chemical so that they can be heated and bent as though they were taffy.

We read that a tree has been felled experimentally by pulling a nichrome wire, heated red hot by a high current at low voltage, through the trunk by weights.

A comparatively simple but highly sensitive voltmeter has been developed which foresters, entomologists and other trained persons can carry

SELL YOUR ROSES, PERENNIALS, SHRUBS, VINES AND FRUIT TREES

STARTED &
GROWING in

CLOVERSET POTS

PAT. NO. 2073695

These are some of the reasons that we say—

"This is the Modern Way"

1. NO LOSS FROM BREAKAGE

The Cloverset Pots are made from tough, asphalt-impregnated, felt stock and, though light in weight, are strong, pliable and not easily broken. They will last a full year under normal conditions.

2. STARTED AND POTTED PLANT SELDOM LOST

Many customers through carelessness or lack of experience fail to start dormant plants. There is so little loss in transplanting a potted, started plant whose roots are in good soil that you will not have to hesitate to guarantee that all of your potted stock will grow.

3. EASY FOR PURCHASER TO REMOVE FROM PLANT

No can openers, hammers or hatchets are needed to remove Cloverset Pots from plants. All your customer has to do is simply tear or cut off the pot and throw it away.

CLOVERSET POTS ARE PRICED
TO BE A GIVE-AWAY ITEM



The cost of Cloverset Pots will be amply repaid when highest retail prices can be commanded and good will gained with dependable, growing stock.

Write for free circulars and catalog giving description, size and price lists and technical instructions for use.

Sample carton, all four sizes, standard heavy weight, 25c.



Write today, send your problems, inquiries and requests for information and we will try to assist you from our experience and the experiences of users throughout the country.

No.	Height	Top Diam.	Bottom Diam.	Soil Capacity	Corresponding Size Clay Pot	Weight Per 100	Price Per 100	Price Per 1000
0	5 ins.	5 ins.	4 1/2 ins.	3 1/2 lbs.	6-in.	35 lbs.	\$2.50	\$22.50
1	6 1/4 ins.	6 ins.	5 1/2 ins.	9 lbs.	7-in.	52 lbs.	4.00	35.00
2	9 1/4 ins.	7 ins.	6 1/2 ins.	15 lbs.	8-in.	77 lbs.	4.50	40.00
3	9 ins.	8 ins.	7 1/2 ins.	20 lbs.	9-in.	88 lbs.	5.00	45.00

No. 0 FOR PERENNIALS AND FOR GREENHOUSE USE.

No. 1 FOR PERENNIALS.

No. 2 FOR ROSES AND SHRUBS.

No. 3 FOR LARGE SHRUBS AND TRANSPLANTING.

Orders for 300 pots or more take 1000-pot price. Orders for less than 300 pots take 100-pot price.

Unless otherwise instructed, we will determine method of shipment. If you designate express, we advise you to check the cost with your local Express Agent. Please send 1/4 of amount on C.O.D. orders.

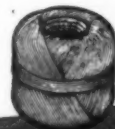
CLOVERSET FLOWER FARM

ERNEST HAYSLER & SON

105TH STREET AND BROADWAY KANSAS CITY 5, MISSOURI

Here's our problem... What do you recommend?

Before the war disrupted supplies of Nursery Twines, such inquiries were meat and drink to us. Too often during the war years it has not been possible to make either an intelligent recommendation or any kind of delivery. * Now that supplies are again becoming available, it will be a pleasure to recommend and supply the Twines required for the needs of the greatly expanded postwar Nursery Industry.



"SINCE 1840"

GEO. B. CARPENTER & CO.

with them into the woods. This instrument will do for them what the stethoscope does for the doctors of human beings. Thaddeus Parr, of the United States Department of Agriculture, discovered that there is a slight difference in electrical potential between the top and roots of a tree. In the spring this gradient is from top to root; later it is reversed. But in a tree that is in poor health the reaction is abnormal, being either weaker than in a healthy tree or reversed in direction.

* * * * *

Lovers of nature who let well enough alone and gardeners with zealous pruning shears have long fought bitterly. Gautier put up a sign in front of his woodland: "All gardeners are prohibited from entering here."

Tulsa, Okla., went at it in a different way. It had a civic group which provided literature and speakers to urge the public to save the city trees "from ruthless and ignorant mutilation." Anyone who has seen street trees hacked off to piteous stubs in the name of pruning will agree that any movement to educate the public on the difference between butchery and intelligent tree trimming is a mighty good thing.

* * * * *

"A tree man once said to me that the poem which contains the line, 'Only God can make a tree,' had done more harm than good to trees and landscaping.

"A few years ago I bought a place on which was a small orchard. The trees were choking each other and, by absorbing all the sunshine, had killed the grass. Half of them were cut down and excess branches pruned from the others, permitting sunshine to filter to the lawn. Within a year the grass was luxuriant and the orchard was transformed.

"Two or three isolated trees, given maximum opportunity for spreading branches, are far more beautiful than a dense wood of trees whose trunks are like telephone poles.

"The basic rules of good landscaping are so simple that it is distressing to observe how often they are violated. The planter or chopper merely needs to remember these three: (1) Avoid straight lines, (2) plant in masses, and (3) keep open spaces.

"The last rule is usually ignored by the misguided lover of trees. If he has a bit of open space in his lawn, he sticks a tree in the middle of it, thus throwing everything out of balance, ruining his lawn and darkening his house."

From Bagology.

And one more quotation in a simi-

WANT ADS

Help and Situation Wanted and For Sale advertisements.

Display: **\$2.50** per inch, each insertion. Liners: **20¢** line; minimum order **\$1.00**

FOR SALE

Close to Seattle, Wash.

For party that wants to go up in the world this 3-acre nursery and landscaping business combined. 14,000 nursery stock plantings. 5,000 in camellias, azaleas, rhododendrons, balance in evergreens and flowering shrubs; 10 per cent landscape numbers, 90 per cent new stock plants. This is not an old overgrown nursery; all plants 1, 2, 3-yr. stock. Also fruit trees, all tools, supplies and equipment for landscaping go. 7-room residence, furniture, Hot Point refrigerator, etc.; barbecue and summer house, store room, chicken house, other bldgs.; alat house 60x100 ft. Garden spot, family orchard, plenty of peaches, asparagus. I bought and paid for this nursery in 30 months. Is free and clear with title insurance. River adjoining property for irrigation. No failure on water here. Write owner direct or phone Kent, Wash., 338 W. Have other interests; price, \$13,500.00.

BOB HAGAN (Owner)
Rt. 4, Box 19, Kent, Wash.

FOR SALE

Eastern Ohio Nursery. 115 acres, well established wholesale and dealer business, well equipped with residences, barns and greenhouses; sprinkler system, storage, etc. Address Box 422, care of American Nurseryman.

FOR SALE

Only full line nursery at Duluth, Minn., is selling out. A fine opportunity for an aggressive man. No buildings. Small acreage.

KAPP'S DULUTH NURSERY
Rt. 4, Box 352 Duluth 2, Minn.

SITUATION WANTED

Nursery Manager—Possibility to buy. 4 years college education in nursery management; born and raised on nursery; 7 years experience as manager of large nursery well known throughout United States; married, no children; have best of references. Address Box No. 426, care of American Nurseryman.

HELP WANTED

Experienced nurseryman and sales manager for our branch nursery and garden shop.

Must know perennials and all kinds of nursery stock. Must know how to grow and propagate same. A fine opportunity with a future for the right man. Living quarters on place. State all details as to your experience and references in your first letter.

HILLSDALE LANDSCAPE
R. R. 13, Box 158
Indianapolis 44, Ind.

HELP WANTED

Nursery superintendent for large eastern wholesale firm. Nursery production experience necessary. Age 30 to 40. Want man who will maintain high efficient output, yet warrant respect and cooperation of approximately 150 employees. Salary based on ability and proven record.

Address Box 425, care of the American Nurseryman.

HELP WANTED

Landscapers—Nursery Helpers—Salesmen.

Pleasant place to work.

A. F. AMLING CO.
8900 W. North Ave. Maywood, Ill.

HELP WANTED

NURSERY DIGGING FOREMAN
A man capable of handling several sub-foremen of digging gangs. To such a man we believe we can offer the best position in the industry as to salary, bonus and general working conditions. Address Box 433, care of American Nurseryman.

lar vein, this by Alan Devoe in the American Mercury.

"Any seasoned vaudevillian knows that there are three infallible methods of plunging an audience into enraptured sentimentalism. The first method is to sing a song about home; the second is to make reverent reference to mother; the third is to recite Joyce Kilmer's verses about trees. No audience, however tough or apathetic, is proof against these performances.

"The psychologically-minded may find it profitable to ponder these things and to reflect upon the singular divorce between the themes that stir people to wet-eyed sentimentalism and the themes that really move them to action.

"We break down on hearing references to mother, but it is a matter of

record that as a country we treat our mothers with infinitely less respect than is customarily accorded the patriarchs of other lands. We are reduced to tears by the crudest ballad about home, but it is a matter of record that we are the most nomadic tribe of itinerant apartment-dwellers on earth. Finally, we are moved by Mr. Kilmer's rhyme to moods of tremulous exaltation, but it is a matter of record that in our actual dealings with our native trees we have consistently displayed an unmatched flair for stupid and rapacious wood-butchery."

* * * * *

We culled these items of horticultural interest from "Lock, Stock and Barrel," by Douglas and Elizabeth Rigby:

Thutmose III, Egypt's "Little Napoleon," collected botanical specimens and had them cataloged by carving them in stone in the botanical chamber of the temple at Karnak.

Traveling Egyptians brought home rare plants, and the museum at Alexandria had botanical collections of note.

Gaston, Duke of Orleans (1608 to 1660), established a private botanical garden.

Madame de Pompadour loved gardens and collected rare and imported plants, among which were fifty orange trees, one yellow jasmine of Judea, a sensitive plant and two oleanders.

But most interesting to Americans is the account of the work of Dr. John Bard and his descendants. In the middle of the eighteenth century, Dr. Bard planted specimen trees on his property near the Hudson, at Hyde Park, N. Y. Over a period of nearly 200 years this country place with its unique specimens has become a veritable arboretum.

In 1939 the late President Roosevelt told a prospective buyer that he greatly desired this place as a public monument, the house to be a museum for the display of forestry, landscaping and similar exhibits. The buyer considerably withdrew, and in 1940, through the owner's generosity, the former Bard estate was turned over to the public for the purposes outlined by Franklin D. Roosevelt.

CONNECTICUT FORESTER.

Henry W. Hicock, for the past twenty-seven years assistant forester at the Connecticut agricultural experiment station, New Haven, has been appointed head of the forestry department to succeed Walter O. Filley, who recently retired.

After receiving his master's degree from Yale University, Mr. Hicock engaged in forestry work in various states and during World War I served overseas as a sergeant in the engineers.

In 1919 Mr. Hicock became associated with the Connecticut station and was in charge in blister rust control for the state and later carried on research in forest soils. More recently he has been engaged in studies of various methods of wood preservation.

THE McDonnell Nursery, Oakland, Cal., held an exhibition, April 6 and 7, of the cut daffodil varieties which it will have to offer next fall. Some kinds were shown for the first time in America.



Pat. No. 110110

\$35.00

F.O.B. K. C. Kansas

NURSERY HAND TRUCK

Material shortages still limit production. We are grateful for the understanding patience of our many good customers who accepted delayed delivery this Spring. We are continuing to ship as quickly as we can, filling orders in the same order we receive them. We suggest that you order now for your Fall season needs.

SPECIFICATIONS

Equipped with Jumbo Balloon Tires and Tubes, 12x4 inches.
Specially Designed Curved Nose.
All-steel Construction, electrically welded.
Weight 58 pounds.
Over-all Length 63 inches.
Over-all Width 27 1/2 inches.
Capacity 28-in. Ball weighing 600 pounds.

THE GARDEN SHOP, Inc.

4819 Mission Rd.

Kansas City 3, Kan.

CYCLONE HEDGE TRIMMER



A single-blade, multiple-finger trimmer. Double-edge blade cuts in both directions; cutting is continuous, more like mowing. Trims hedges, bushes, shrubs, field plants, etc.

Trims 4 and 5 times faster. Easy to use. Weighs only 3 1/4 lbs.

\$9.75 F.O.B. Ayer, Mass.

CHANDLER MACHINE CO.,
AYER, MASS.

CHARLES SIZEMORE Traffic Manager

319 1/2 Georgia St., Louisiana, Mo.

Loss and damage claims against railroad and express companies collected.

Freight bills audited.

Past due notes and accounts collected.

Well known to the nurserymen of the country.

Reference: Bank of Louisiana.

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KATHISH BRAND
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Piqua, Ohio

Tools — Grafting Supplies

Write for Bulletin.

WESTERN SHADE TREE CONFERENCE PROGRAM.

The thirteenth annual meeting of the western chapter of the National Shade Tree Conference, to be held May 23 to 25, at the Mission Inn, Riverside, Cal., will include field trips as well as an educational program.

The conference will open at 10 a. m., May 23, with a round-table discussion on the outstanding problems of arboriculture. Members of the round table will be Edward Scanlon, editor of *Trees*, Santa Monica, chairman; Roger Sohner, Sohner Tree Service, San Anselmo; Keith Davey, Davey Tree Surgery Co., San Francisco, and Leslie Mayne, San Mateo.

President Glenn Garwood, superintendent of parks, South Pasadena, will open the afternoon session. On the program will be Dr. Samuel Ayres, reporting on "Arboretum Development"; Howard Wilcomb, of the Los Angeles county agricultural commission, speaking on "The Regulation of Commercial Pest Control Operators"; L. C. Petrie, of the Charles F. Irish Co., Cleveland, O., discussing "Air Pressure Feeding"; Dr. George Zentmyer, University of California, at Riverside, telling of new developments in fungicides, and Dr. A. M. Boyce, of the citrus experiment station, Riverside, reporting on new developments in insecticides.

The morning of the second day will be devoted to field demonstrations and the inspection of new equipment, to be followed by a business meeting and the election of officers. The afternoon program will include an open forum discussion on diseases and insect pests under the direction of Prof. P. A. Miller, of the University of California at Los Angeles. After hearing a description of the shade trees in and around Riverside by Dr. A. D. Shamel, of the Riverside board of park commissioners, the group will make a tour of the city's parks and plantings under the direction of George Rash, superintendent of the parks and also local arrangements chairman for the meeting. In the evening there will be a banquet and the installation of the newly elected officers.

The final day of the conference will be given over to a tour of the citrus experiment station at Riverside.

REFORESTATION PROGRAM.

As a result of scientific development, lumber is only one of an endless number of products from the forests, and it is only good business to see that the present and future

forests pay greater dividends to all concerned. With this thought in mind, the Wisconsin valley paper-making industry founded *Trees for Tomorrow, Inc.*, at Merrill, Wis., a nonprofit organization to aid in protecting and renewing the woodlands of the Wisconsin valley.

This spring *Trees for Tomorrow, Inc.* will again distribute two free seedling trees to valley farmers, loggers and timber tract owners, for each tree harvested since 1942, regardless of species. To participate in this two-for-one program, a farmer or timber tract owner need only fill out a return post card at his county agent's office, indicating the soil conditions, the range and section where the trees would be planted and the species desired. The applicant is notified of the exact location and the time when the seedlings will be distributed in his locality. A booklet on correct planting procedure is supplied with the seedlings, and the services of a forester are available for working out forestry management plans.

School, community and memorial forests are included in the mass planting program. School children and community organizations cooperated in planting the Merrill forest of 840 acres of city-owned property which stands as a memorial to the county's military heroes. There are now fifty-six school forests in the valley. During the past year five \$500 forestry scholarships were given by *Trees for Tomorrow, Inc.*, to high school students who showed keen interest and aptitude for forestry.

The plan of reforestation has been so enthusiastically received by the people of Wisconsin that 4,000,000 trees were planted last year and requests for seedlings to be distributed this spring were received as early as June, 1945.

WOOD BORERS.

When trees have been attacked by borers, they are generally found to have been weakened or become ill nourished. Watering and fertilizing may be needed. If trees are crowded, removal of some may be necessary. Pruning out damaged limbs on mature trees may give health to the remainder. When large trees are pruned, it should be done so as not to expose the limbs so much that sunscald may result. These sunscalded areas are often attacked by adult borers, resulting in the destruction of the tree. On newly set shade trees, wrapping the trunks is an excellent preventive measure.



NURSERY STAKES GALVANIZED STEEL

No. 6 Gauge — .203-inch.
Fine grade hard steel.
Heavily galvanized.

Sample sent upon request.

Length	Per 100	Per 1000
3 ft.	\$3.50	\$29.50
4 ft.	4.70	39.00
5 ft.	5.85	48.50
6 ft.	6.95	58.00

Shipped fresh and new from our mill in Indiana. Delivery in 3 to 4 weeks.

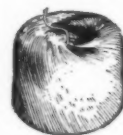
We also have BAMBOO CANE STAKES.

PRUNING COMPOUND



Recognized and accepted as the finest TREE WOUND PAINT available. Thin only with raw linseed oil.

No. T-693 — 1-gal. cans . . . Each \$ 1.75
No. T-694 — 5-gal. drums . . . Each 6.50
No. T-695 — 30-gal. drums . . . Each 32.50



NURSERY TWINES



2-PLY
SISAL TWINE
10-lb. BALLS—
each (27c lb.)
\$2.70
50-lb. REELS—
each (25½c lb.)
\$12.75

SISAL ROPE—Finest Quality



Soft, pliable and non-kinking. Three - strand — oiled and treated. At Last! PURE SISAL of beautiful quality, for which you have long waited.

—Sold only in full coils—

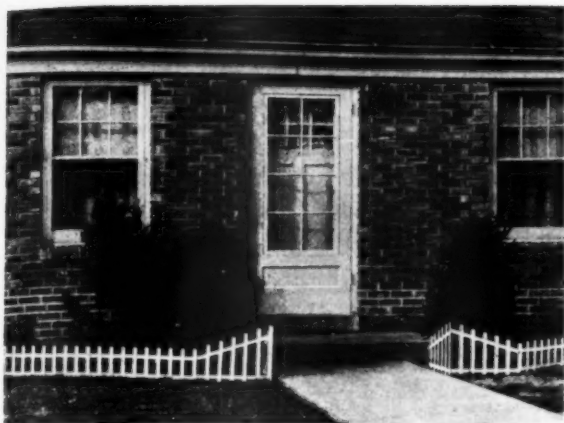
No. T-370 — ¼" — Per 2750 ft. coil (23¼c lb.) . . . \$14.34
No. T-380 — ½" — Per 1200 ft. coil (21c lb.) . . . 18.90
No. T-381 — ¾" — Per 1200 ft. coil (20¼c lb.) . . . 32.90
No. T-382 — 1" — Per 1200 ft. coil (20c lb.) . . . 40.00

Meets all U. S. Gov't requirements—
Size Breaking Strength Ft. per lb.
1½" 2100 lbs. 13½
¾" 3500 lbs. 7½
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28" Prompt shipment from Chicago.

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PLANT QUARANTINE EMERGENCIES.

[Continued from page 14.]

introduction of this type of nondetectable diseases. Detention stations for the holding of plants, surveillance and other special safeguards need more serious thought and careful consideration.

No doubt every official here has read and studied the joint resolutions adopted by the Commissioners of Agriculture of the Southern States and the Southern Plant Board at Gulfport, Miss., February 12, 1946. States with good ocean ports are often faced with many acute problems. Arthur C. Brown, plant commissioner of the State Plant Board of Florida, presented at this joint meeting an interesting treatise of the question, "Is our present system of federal plant quarantine enforcement adequate?" This paper is clearly written and brings up a number of important questions needing serious action. Although you may not be entirely in agreement with a few of Commissioner Brown's points, it should be remembered that Florida is actively and substantially supporting the federal plant quarantine program. California, I believe, also cooperates substantially with the federal government in foreign quarantine work. How can the central states be of more assistance to the federal government in foreign plant quarantine work? This is a timely topic and needs to come up for discussion and consideration.

In closing these brief remarks, I should like to urge closer and more active cooperation between the states and especially with the federal government. To repeat again for emphasis, the federal program is our program. Much can be done through the senators and congressmen of our respective states. Congress is responsible for making the laws that safeguard our agriculture. It is our privilege and duty as state regulatory

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officials to see that the senators and congressmen from our respective states have the information and facts needed to act wisely and intelligently in making laws necessary to protect American agriculture from injurious insects and plant diseases from foreign lands.

And lastly, it seems desirable to bring up one more item for thoughtful consideration. We have just passed through the greatest war of history and this is our first peacetime meeting. During the long struggle of war emergencies, there were mass movements of troops and enormous shipments of materials throughout the entire world. Reports should be published of new pests carried into the United States during the long war period. Cooperative federal-state surveys should be initiated immediately on a nation-wide basis to discover newly introduced foreign plant pests and determine their present status and what action, if any, should be taken. A survey of this kind will require several years of close cooperation among the states and between the states and federal government.

OBITUARY.

Edward B. George.

Edward B. George, prominent nurseryman of Lake county, Ohio, died April 14 at his home, at Painesville, following a heart attack. He was 70 years old.

Mr. George was born to the nursery business, his family home being on the grounds of the Storrs & Harrison Nurseries Co., where his father, Robert George, was long vice-president and general manager. Edward George became well known to the trade during his thirty-six years with the Storrs & Harrison firm, of which he was assistant manager and superintendent of greenhouses until 1927, when he succeeded his father as vice-president and general manager.

Prominent in association activities, he served as vice-president of the American Association of Nurserymen in 1927.

Since February 1 Mr. George had been serving as field manager of the Farm Bureau Agricultural Credit Association and before that time had served with the United States Employment Service.

Mr. George is survived by his widow, Mrs. Katherine Slocum George, whom he married in 1901; a son, Edward W. George, and a sister, Mrs. Albert W. Davis, both of Painesville, and three grandchildren. Another son, Robert, died in 1930.



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TESTS WITH FERTILIZER IN FOLIAGE SPRAYS.

New information developed in experiments with various nitrogen materials used in sprays opens up the possibility of applying to advantage at least a part of the fertilizer nitrogen to apple trees in this manner.

This procedure, in which the nitrogen is applied as part of foliage sprays designed for disease and insect control, was tested with encouraging results by the New York agricultural experiment station. The results were particularly promising when the fertilizer used was nitrogen supplied in the form of urea by Uramon fertilizer compound.

Following preliminary studies in which sodium nitrate (both Chilean and synthetic), ammonium nitrate, ammonium sulphate and Uramon were tested, Dr. J. M. Hamilton, plant pathologist stationed at Geneva, N. Y., and Dr. D. H. Palmiter, plant pathologist, and L. C. Anderson, pomologist located at Poughkeepsie, suggest the use of nitrogen in sprays as a means of more accurately controlling the supply of nitrogen in trees.

They report that nitrogen applied to trees in sprays may be absorbed by the leaves and quickly affects the nitrogen content and appearance of the foliage.

"Wettable sulphurs and an available supply of organic nitrogen add to the possibilities of introducing nitrogen into the spray mixture," they add. "Such a practice would have been considered impossible a few years ago with the materials then in use, if for no other reason than the danger of arsenical injury."

The New York scientists state that the results of their studies suggest that "nitrogen (urea) may be applied to apple trees without injury with foliage sprays now designed for disease and insect control." This suggests the possibility of controlling the nutritional status of the tree more

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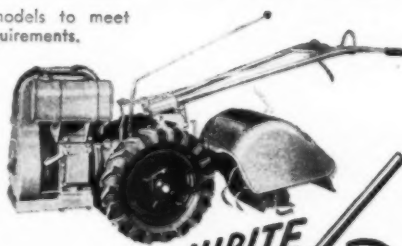


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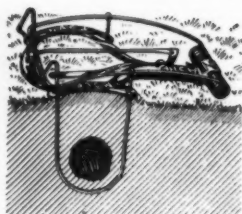
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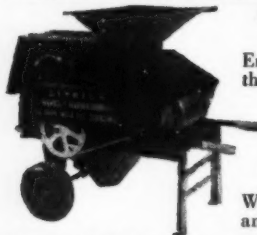
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closely than might be accomplished by application to the soil, and of applying fertilizers in this way as a supplement to soil treatments.

They also found that the effect of nitrogen in sprays on color of foliage and nitrogen content of leaves slowly or gradually disappeared throughout the season. They point out that it was possible to apply nitrogen in the early part of the season so as to have it available to the plant when needed, and yet not have an excess of nitrogen in the fall to interfere with good coloring of fruit. They add that the value of such a practice might be accentuated during periods of low rainfall or in dry areas.

The nitrogen carriers were applied in quantities to supply equal amounts of nitrogen, with the wettable sulphur, lime and arsenate of lead, each at three pounds to 100 gallons of water. The nitrates were used at 5-100, and the other materials on a comparable basis. Uramon, which contains forty-two per cent nitrogen in the form of urea, was also tested at 5-100 and 10-100 concentrations. The trees received about ten to fifteen gallons of spray per tree, and the sprays were applied at the pink stage, at petal fall and fourteen and thirty days after petal fall.

The nitrate materials were more likely to cause injury than ammonium sulphate or Uramon. In fact, the Uramon was used without injury in heavier concentrations than any of the other materials.

NEW SPRAY HOSE.

A spray hose of lighter weight and increased strength has been developed by the United States Rubber Co. for spraying fruit orchards and field crops infested with insects.

Made of synthetic rubber, the hose is reinforced with two layers of Ustex, a special cotton yarn treated with plastics to increase its strength as much as seventy per cent. During the war Ustex was used for making parachute harness.

This hose was formerly built with three layers of untreated cotton yarn, which gave it greater weight and bulk but less strength and flexibility than the new product.

AN ARTICLE concerning the Ross R. Wolfe Nursery, Stephenville, Tex., appeared in a recent issue of the Sealy, Tex., News. It discussed his papershell pecans, Ross berry, strawberry plants and frost-resistant peach. Mrs. Wolfe's gladiolus and rose garden also were mentioned.

HORMO ROOT for CUTTINGS

A new product made up of an efficient root-producing hormone and a fungicide, together with other growth-stimulating agents. Best applied with a duster or mixed with water at the rate of four rounded tablespoons to the quart.

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CUT PLANTS KEPT FRESH.

Scientists at the New York experiment station, Geneva, have developed a vacuum treatment to lengthen from four to thirty-six hours the period during which succulent plants and certain cut flowers may be kept in a fresh, turgid condition.

As described in a recent issue of the Science News Letter, the process consists of submerging the cut plants in an airtight container equipped with a stopcock, and removing the air from the container by means of a water pump until a pressure of about thirty pounds per square inch was obtained. This pressure was maintained for twenty minutes, during which time air bubbles streamed from the plants and water moved into the tissues. The pump was then turned off and the pressure gradually brought back to normal. During treatment, the plant tissues took on a water-soaked appearance and became translucent, but this condition gradually disappeared and the plants appeared normal.

Among the plants tested, the most striking results were obtained with lilacs. Untreated lilacs that lay exposed to the air were badly wilted within eight hours, while vacuum-treated lilacs remained in a fresh, turgid condition four to eight hours longer. Branches placed in water immediately after treatment remained fresh and in condition for five days, whereas untreated branches placed in water wilted within two days and were badly wilted within three days. Conflicting results were obtained with roses. In general, the best results were obtained with plant materials which have large leaves and stems and large inferior ovaries capable of serving as reservoirs.

CATALOGS RECEIVED.

Willis Nursery Co., Ottawa, Kan.—Wholesale price list of shrubs, hedge plants, shade trees, fruit trees, small fruits and perennials; 16 pages and cover, 5½x8¾ inches.

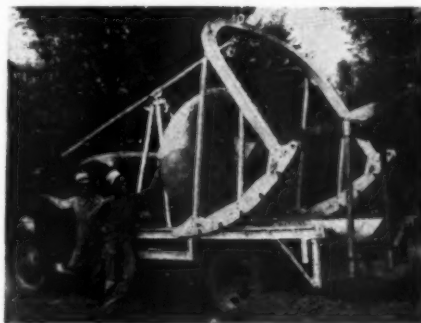
Mount Arbor Nurseries, Shenandoah, Ia.—Wholesale catalog of fruit trees, small fruits, deciduous trees, ornamental shrubs, roses and perennials; 40 pages, 6x9 inches.

Joseph F. Martin Co., Painesville, O.—Wholesale catalog offers wide variety of perennial plants, chrysanthemums and iris featured; 16 pages and cover, 8½x11 inches.

Somerset Rose Nursery, New Brunswick, N. J.—Wholesale catalog of flower and vegetable seeds, hardy chrysanthemums and new English chrysanthemums, greenhouse and pot plants, 48 pages and cover, 8½x11 inches.

Sheridan Nurseries, Ltd., Sheridan, Ont.—Wholesale catalog of evergreens, shrubs, shade trees, perennials and roses, well il-

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After many years devoted to the development and manufacture of tree movers, Williams & Harvey are again starting to produce the latest model Rocker Type Tree Mover.

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This is not a revision of the old book, "Hill's Book of Evergreens," published in 1936, which is now out of print. It has been completely rewritten, greatly improved and enlarged, and is unquestionably the most complete book on this subject ever published.

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Herbst Brothers, 92 Warren St., New York 7, N. Y.—Wholesale list of seeds, insecticides, fertilizers and books; 28 pages, 4x9 inches.

Charles Fiore Nurseries, Prairie View, Ill.—Wholesale price list of shade and ornamental trees, flowering shrubs, evergreens, fruit trees and perennials; 36 pages and cover, 4x9 inches.

New Augusta Nursery, New Augusta, Ind.—Wholesale price list of perennials, 2 sheets 8½x11 inches; also retail price list of perennials, 4 sheets 8½x11 inches, one sheet devoted to iris.

Thomas B. Meehan Co., Dresher, Pa.—Price list of ornamental trees and shrubs, 4-page folder, 5½x11½ inches.

M. Herb, Naples, Italy.—Wholesale price list on flower seeds, 1945 crop; 6 pages, 8½x11½ inches.

Conard-Pyle Co., West Grove, Pa.—Retail catalog of roses, chrysanthemums, delphiniums and hardy perennials, profusely illustrated in color; 32 pages, 6½x10 inches.

McDonnell Nursery, Oakland, Cal.—Retail catalog of flowering shrubs, trees, perennial plants, fruit trees and small fruits; illustrated in color, 48 pages, 7¾x10¾ inches.

W. A. Natorp Co., Cincinnati, O.—Retail catalog of choice evergreens, broad-leaved evergreen shrubs, ornamental and flowering trees, flowering shrubs and hybrid tea roses; illustrated in color, 12 pages, 9x12 inches.

Richards' Gardens, Fort Collins, Colo.—Retail catalog and planting guide of evergreens, deciduous trees and shrubs, roses, perennials and garden supplies; illustrated, 8½x11 inches.

Corliss Bros., Inc., Gloucester, Mass.—Retail catalog of nursery stock, with illustrations, 64 pages and cover.

I. W. Scott Co., Pittsburgh, Pa.—Retail catalog of seeds, summer-flowering bulbs, gardening supplies and equipment; illustrated, 92 pages and cover, 8x10 inches.

Bobbink & Atkins, East Rutherford, N. J.—Retail catalog of roses, hardy perennials, vines, rock garden plants, low evergreen and flowering shrubs, handsomely illustrated in color, 56 pages, 9x12 inches.

Bristol Nurseries, Inc., Bristol, Conn.—Retail catalog of chrysanthemums, hardy perennials and roses, illustrated in color, 16 pages, 8½x11 inches.

Bergeson Nursery, Fertile, Minn.—Retail catalog of small fruits, shade and ornamental trees, evergreens and perennials; 16 pages and cover, 3½x8 inches.

Wade's Nursery, Molalla, Ore.—Retail folder of azaleas, rhododendrons, conifers, perennial plants and bulbs; 4x8½ inches.

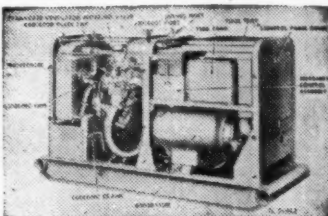
Keith Plant Nursery, Sawyer, Mich.—Retail catalog of berry plants and small fruits; 24 pages, 5¾x8¾ inches.

Ruth Hardy Wild Flower & Fern Nursery, Falls Village, Conn.—8-page folder of wild flowers and ferns, 3½x7 inches.

Groveside Gardens, Downers Grove, Ill.—6-page folder of phlox, gladioli, mums and dahlias, 3¾x8½ inches.

HAVING received his discharge from the army, I. E. Ricklefs has returned to his former position as superintendent of parks at Salina, Kan.

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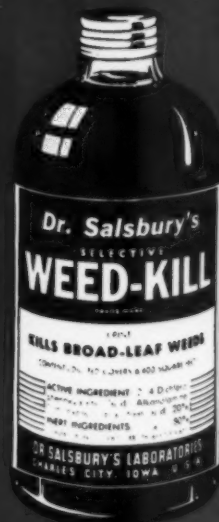
Advertising, plant name, color-banded and plain labels. Write for price list.

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EASY TO USE

Concentrated Weed-Kill can be greatly diluted for economy . . . One gallon treats 1 1/5 acres; Five gallons, 6 acres, ordinary coverage. For retail sales 1/2 pint will treat 3200 square feet; one pint, 6400 square feet.

Use any standard spraying equipment and apply as a light dew. Weed-Kill does not sterilize the soil, corrode equipment, nor stain. Leaves no harmful residue.

**DR. SALSBUARY'S
LABORATORIES**

Charles City, Iowa

KILLS THESE and Many Other Broad-leaf Weeds

Bindweed	Pigweed
Bitterweed	Poison Ivy
Buckhorn	Poison Oak
Chickweed	Puncture Vine
Cocklebur	Plantain
Daisy	Ragweed (young)
Dandelion	Shepherd's Purse
Docks	Speedwells
False Strawberry	Stinging Nettles
Fern Weed	(young)
Heal-All	Sumac
Honeysuckle	Teasel
Jimson	Thistles
Lamb's Quarters	Trefall
Mallow	Velvet Leaf
Morning Glory	Water Hyacinth
Mustard	Wild Carrot
Pennywort	Wild Lettuce

NATION-WIDE ADVERTISING POINT-OF-SALE DISPLAYS

Farm Journal and Better Homes and Gardens advertisements make consumer sales easy. Industrial and commercial publications help the sales of Weed-Kill service. Order your supply today for bigger sales, extra profits.

* 2, 4-Dichlorophenoxyacetic acid

SELL THE GENUINE

Dr. Salsbury's
SELECTIVE
WEED-KILL

**KILLS MOST BROAD-LEAF WEEDS
Completely... Roots and All**

Still Shipping **EVERGREENS**

By the time this is in print, we hope to have all of our orders dug, and we are now in position to give service on shipments for such items as are now available.

While the assortment is not complete, we still have some good fast-selling choice material and will be able to ship probably until the middle of the current month. If you are short of stock, get in touch with us for present available offerings.

D. HILL NURSERY COMPANY

Evergreen Specialists :: Largest Growers In America

DUNDEE, ILLINOIS